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Jacksonville 1847–Psychiatry Then and Now*

WINFRED OVERHOLSER †

DOROTHEA Lynde Dix was one of the greatest American women of the last century, and it is always a privilege to pay a tribute to her accomplishments. Beginning in 1840, she carried on almost unaided a campaign designed to ameliorate the lot of the mentally ill; as a result, she brought about the enlargement or the establishment of over thirty state hospitals in the United States as well as a few in other countries. She was a great humanitarian whose services to mankind have had all too little recognition.

Jacksonville State Hospital is one of the monuments to the memory of Miss Dix. In the fall of 1846, she journeyed to Springfield, Illinois, travelling by rail from Boston to Pittsburgh, by boat down the Ohio and Mississippi Rivers to St. Louis, and from that city by stagecoach to the capital of Illinois. It was a trip at which any of us today would shudder, but, in spite of its rigors, it did not in the least deter her, a frail woman no longer young, from what she saw as her duty to the mentally ill of the state. She had previously travelled about Illinois, visiting numerous cities and towns and observing there the condition of the mentally ill. In the Memorial which she addressed to the legislature of Illinois in January, 1847, she said, "I have seen many [insane persons] in private dwellings, in cabins, in pens and wandering at large; often, very often, bearing the marks of rude assault and the effects of exposure to storms and frost." Mental disease, she continued, "is not confined to rank, age, sex or condition; all are liable to its attacks and all are directly concerned to secure means for its cure. This can be done only by the establishment of a hospital adapted expressly to this end." She presented the needs of the mentally ill of the state not as "charity" but as a "just claim." The legislature was responsive and on March 1, 1847 passed the act of incorporation of the Jacksonville State Hospital.

A century ago, there were in this country only twenty state hospitals located in nineteen states, with a total capacity of 4,711 patients, although

* Memorial address at Centennial of Jacksonville State Hospital, Illinois, July 26, 1947.

† Saint Elizabeths Hospital, Washington, D. C.

there were said to be a total of 18,000 insane in the United States in addition to about 6,000 idiots. The rate of resident mental hospital population was estimated at 102 per 100,000 of the general population. By contrast, we may note a few figures from the latest United States Census report, that for 1944. In 617 mental hospitals, Federal (including veterans' hospitals), state, city, county, and private, there were 582,626 patients at the end of the year, or an average of 343.2 per 100,000 general population. To the hospitals designed for other than temporary care, there were 177,464 admissions, and the total cost of their operation was $189,618,714. The average cost for the maintenance of the state hospitals was $366.35 per patient for the year, the highest cost being $811.00 and the lowest $196.00. One of the factors in this growth has been the recognition of the value of hospital care, together with the provision of further facilities. Another has been the rapidly growing proportion of the elderly in the general population; in the upper age groups the incidence of mental disorder is the highest, and a distinct change in the age groups in mental hospital populations is coming about, with important implications regarding construction policies and planning for the future care of this group of patients. Then, as now, the numbers of the mentally ill considerably exceeded the facilities for their hospital care.

Illinois, at that time the westernmost state to have authorized a mental hospital, was essentially an agricultural region, and far from wealthy. The village on Lake Michigan had not yet become the huge, enterprising, and wealthy metropolis that it is today. The financial provision for the new hospital was meager; it was estimated that the special tax which was levied for the purpose of constructing it would yield only approximately $240.00 per bed for construction, a low figure even for those days. The first patients were received in November, 1851 before the new building was really ready for their care, and by 1862 the population of the institution had reached the staggering total of 500! Already there had been some political attacks upon the hospital and the superintendent had been changed once, not to mention the board of trustees. By 1860, we find a statement in the trustees' report which has too familiar a ring. Their hospital, they say, is in the "first position" for expense, costing only $2.77 per patient per week, whereas the Pennsylvania Hospital is costing $5.00, and the Government Hospital for the Insane, now Saint Elizabeths Hospital, $4.59; in other words, the

cheapest is the best! Through the years, there have been boards of control and state departments of public welfare who have fancied that by having a lower per capita cost than their neighbors, they were making a favorable record. The recent accounts in publications of national circulation indicate how we are reaping the whirlwind from this false economy. In the early books of the Bible, it is recorded that bricks cannot be made without straw. Too much straw has been left out of the figurative bricks of our state hospitals in years past, and the public is at last realizing that a policy which provides inadequate and poorly trained personnel, inadequate food and clothing, and crowded housing for the patients in its mental hospitals is not properly fulfilling their needs, social, humane, or medical. No mental hospital in this country can be accused of being spendthrift, but until the state legislatures and the administrative authorities of the states recognize that adequate treatment of the mentally ill demands certain standards, and that the fulfilling of those demands costs more money than is in general now made available, the public will not have the confidence that it should have in the ability of the state to manage medical institutions. The standards recently adopted by the American Psychiatric Association call for a minimum outlay of $5.00 per day for the hospital care of acute mental patients, and of $2.50 per day for those requiring prolonged care.

The notions concerning the nature of mental disorder were far different one hundred years ago from those which are generally accepted today. As Miss Dix expressed it in her Memorial, mental disorder proceeds "from physical causes which disable the brain for a time from the correct exercise of those functions through which the mind is represented. This malady is subject to successful physical treatment as surely as a fever or other common bodily complaint." This doctrine had been enunciated by Benjamin Rush in the first book on psychiatry published in this country in 1812. To him, disease of the mind was disease of the brain. Galt's *Treatment of Insanity,* published in 1846, abstracting nearly one hundred authors, mostly European, was the only volume on psychiatry beside that of Rush which had appeared in this country at the time of the founding of Jacksonville. In the early years of the nineteenth century, what Albert Deutsch in his book *The Mentally Ill in America* has termed the "cult of curability" flourished, and institutional superintendents vied with each other in claiming cures, one of them indeed reaching the figure of 100 per cent! By 1847, however, this cult

was waning. A writer in *The American Journal of Insanity* in 1848, for instance, cautioned against the overclaims of cures, remarking that the reports of mental hospitals were too self-laudatory as if they were "competing like mineral springs and water cure establishments"; he proceeded to caution against satisfaction with present methods of treatment.

Even though the importance of physical causes was emphasized, however, it was recognized also that certain environmental factors could not be overlooked. In the third biennial report of the hospital, for example, among causes of the psychoses observed in the patients, we find intemperance, disappointed love, domestic affliction, study of the Scriptures, religious excitement, spiritual rappings, jealousy, ill-treatment, and lactation. Although physical treatment, the use of tonics, diet, and various medications were stressed, there was also mention of what was referred to as moral treatment—that is, those aspects of care having to do with environment, such as work, entertainment, church services, and the establishment of a friendly and encouraging atmosphere in the institution. Apparently, a good deal of latitude was allowed to the patients; many of them had single rooms, and each came in contact with the superintendent or the assistant physician daily—at least for a greeting. Indeed, one of the reasons for the then-prevalent doctrine that a mental hospital should care for no more than about five hundred patients was that otherwise the superintendent could not greet each patient daily!

We should remember that there was no such specialty as psychiatry in the forties, or indeed until about the turn of the present century. Such neuroses as were recognized were treated (symptomatically) by the neurologist. Many of the mentally ill were kept at home, despite the fact, well recognized even then by physicians, that the surroundings in which a psychosis had developed were not likely to be most conducive to a cure. The more disturbed were sent to such institutions as existed, although in all too many parts of the country they were confined instead in jails or in poorhouses. One of the disadvantages under which the mental hospitals of today labor is that historically these institutions were devised originally as instruments of the police power or of the administration of public charity; that is, to house the "furiously mad" and the "pauper insane." The stigma of this origin is one which the mental hospitals have striven through the years to overcome. In those states,

particularly where they have been administered as part of a medical organization such as a department of mental hygiene—that is, where they have been recognized frankly as medical institutions—the success in living down this tradition has been greater than in those states where they have formed a part of the public welfare organization of the state. Of course, in those states where political patronage rather than medical competence has been the prime consideration, the hospitals have commanded no respect at all.

Psychiatry in the forties was practised entirely in the mental hospitals and in the courts, particularly the criminal courts. There were no outpatient departments, almost no private practitioners of the specialty, and, although admission to hospitals in the earlier days was fairly simple, voluntary admissions were not encouraged. The psychiatrists of those days were nearly all "asylum doctors," with a sprinkling of "alienists." Indeed, what is now the American Psychiatric Association was known as the Association of Medical Superintendents of American Institutions for the Insane until 1892, when its name was changed to the American Medico-Psychological Association to conform to the practice followed by its sister organization in England.

The last decades of the nineteenth century witnessed several significant developments. In Germany, ever since the days of the phrenologists Gall and Spurzheim, considerable interest in neurological localization had been exhibited. With the development of the aniline dyes in the seventies and eighties, much progress was made in staining and studying microscopical sections of brain tissue. The work of the early German neurohistologists shed a great deal of light upon the structure of the central nervous system but still tended to emphasize the dualistic approach which was then in vogue, the separation of mind and body, two entities somehow or other related. In 1895, in the appointment of Folin as pathologist at the McLean Hospital, a trend toward the study of the chemical rather than the anatomical aspects of mental disorder was set in motion. The most significant development in this particular period, however, was the appointment of Adolf Meyer, a young Swiss pathologist, to the staff of the Kankakee State Hospital. He had been trained as an organic pathologist, but from the start of his extraordinary career, he emphasized the general pathological evolution of the symptoms—physical and mental—not the mental symptom alone. His conception of mental disorder was a biological one. He viewed the man as a whole,

studying his past and present, synthesizing all points of view, and developed what has come to be known as the psychobiological school of psychiatry. The personal influence of Dr. Meyer has been deep and widespread during the past half century, and he is by all odds the dean of American psychiatrists. Psychiatry is greatly in his debt.

The strictures uttered by S. Weir Mitchell in his semi-centennial address before the Medico-Psychological Association in 1894 were not entirely deserved. He upbraided the psychiatrists of his time for lack of scientific spirit, yet not only was some scientific work really going on at the time, but the foundations were being laid for important and widespread developments in intra- and extramural psychiatry.

During the latter half of the century, the other groups of psychiatric patients were not being entirely neglected. Massachusetts, under the guidance of Samuel Gridley Howe, had established an institution for the mentally defective in 1847, and New York State in 1851. New York, too, had established an institution for alcoholics in 1858, and Massachusetts in 1893. Neither of these latter institutions was an outstanding success by any means, but there is a strong movement afoot today to establish similar institutions; certainly the alcoholics are a desperately neglected class. Separate facilities, too, had been set up by New York State for the criminal insane as early as 1859. Another innovation in the care of the mentally ill had been adopted by Massachusetts in 1885 in the form of what was then known as family care or "boarding out," a plan of which Massachusetts was the sole practitioner for nearly fifty years until the economic urge led several other states to adopt the procedure of placing mental patients in foster homes.

Thus, as the twentieth century came in, there had been a trend first of pure humanitarianism, then of attempts at environmental or moral treatment followed by a study of cell biology and pathology, a study of the reactions of the patient and finally, based on the careful observation and studies of Kraepelin in Germany, a classification which is in large measure the basis of that in use today. Treatment consisted largely in reassurance, attention to physical details, some hydrotherapy and occupational therapy. Psychotherapy, as we know it today, was still unknown, and indeed the fundamental nature of the psychological mechanisms was still a mystery. Clouston, a far-seeing English psychiatrist, had prophesied in 1897 that "a man would appear who would shed the light of a great law on this, the most difficult of scientific

problems." This prophecy was soon to be realized in the contributions of Sigmund Freud, whose keen clinical observation and profound insight and imagination have shed a flood of light upon the entire problem of the neuroses and psychoses. His original work was done upon the neuroses, but today Freud's fundamental concepts are recognized as basic in the treatment of the psychoses as well. His great discovery centered about the rôle of the instinctual life and of the unconscious. He found that the vital urge, creative instinct or what he termed the libido, plays a decisive rôle in normal living and in the deranged states as well. In view of the sexual connotations of the word libido and the misunderstandings centering about the doctrines of repression and symbolism, great resistance to Freud's teachings was experienced by psychiatrists and by the general public as well in these early days, and even today an occasional inadequately-informed cleric will inveigh against them as "obscene" or "godless." Thanks largely to Brill, who first translated Freud's works into English, Smith Ely Jelliffe, and that most effective writer, speaker, and philosopher, William Alanson White, steady progress has been made in the recognition of the fundamental truth of Freud's concepts, until today they underlie the whole fabric of psychiatric thought. Psychotherapy has been established on a firm basis through his contributions to psychological theory. Since 1910, or thereabouts, the concept of psychogenesis in the causation of the psychoses, neuroses, and various somatic disturbances has become more generally accepted and has paved the way for what is sometimes mistakenly looked upon as a specialty of psychiatry, namely, psychosomatic medicine.

In the field of the care of the mentally ill, there were two developments which should be mentioned as taking place early in the century. One was the trend towards the state care of the mentally ill and the elimination of county institutions. As Adolf Meyer pointed out in 1909, state care means "the concentration of the most difficult task in the field of maintenance of the health of the nation in the hands of those who have enough knowledge to see the whole problem before them." This same period saw the development of psychopathic hospitals and of psychiatric wards in general hospitals, urged as far back as 1880 by Clouston, commencing with the Albany Hospital in 1902, the Michigan Psychopathic Hospital in 1906, and the Boston Psychopathic Hospital in 1912. The original purpose of these wards and hospitals was to provide care for transitory psychiatric conditions without the necessity of commitment to a mental

hospital, but they served a considerably greater field of usefulness. They were found to be valuable as teaching organizations and in bridging the gap between the internist and the psychiatrist. As the unitary or holistic concept of mental disorder has developed, the demand for psychiatric facilities in general hospitals has grown, so that today hardly any general hospital of substantial size is planned without a psychiatric facility. The development of psychiatric social work, that invaluable link between the hospital and the community, dates from its introduction at the Danvers (Massachusetts) State Hospital by Dr. George M. Kline, then superintendent, and later the brilliant Commissioner of Mental Disease for Massachusetts. This auxiliary discipline has had a rapid and sound professional growth.

Still another significant development in the era immediately preceding World War I was the appearance in 1908 of Clifford W. Beers' extraordinary volume, *A Mind that Found Itself*. Beers, who had recovered from a serious mental illness which developed soon after his leaving college, devoted the rest of his life to the establishment of the National Committee for Mental Hygiene for the purpose of improving the hospital care of the mentally ill and making it more accessible, extending public knowledge regarding the true nature of mental illness, and stimulating the establishment of preventive activities. In the sixties, Mrs. E. P. W. Packard, a patient of the Jacksonville State Hospital, had created much stir by her charges that she had been "railroaded"—that is, improperly committed. She secured the passage of laws providing various "safeguards," such as jury trial, and a wave of legislation ensued, all of which operated to the disadvantage of the patient who needed care and made the process of admission almost as difficult and stigmatizing as that of conviction of crime. The National Committee urged from the outset that admission to the mental hospital be made as informal as possible and based more upon general hospital practice. Many states have enacted voluntary admission laws, and a number have liberalized their procedures to facilitate "timely relief" for the mentally ill in need of hospital care.

With the outbreak of World War I, the Army immediately turned to the National Committee for assistance in organizing psychiatric services—a refreshing contrast to the hesitancy and resistances exhibited in a similar situation at the beginning of the recent war. Psychiatry in the then-existing state of its knowledge was given every opportunity to show what contribution it could make to the efficient operation of the Army, and, thanks to the genius of Thomas W. Salmon and his associates, that

contribution was a not inconsiderable one. Much was accomplished and learned about the early treatment of acute neurotic disturbances occurring in the zone of combat, and two new auxiliary disciplines may be said to have been born at that time, namely, clinical psychology and occupational therapy. Much interest was generated as well in the somatic manifestations of the neuroses and in the concept of the total individual. Indeed, the entire field of psychiatry received a strong impetus from the experiences of World War I. Two of the untoward developments of World War I may be mentioned. One was the tendency to develop euphemisms for psychiatric disorders—an escapist trend characterized by the coinage of the phrase "shell shock," just as in World War II we have found similar circumlocutions like "battle fatigue" and "combat fatigue" even given official sanction. Such periphrasis does not promote understanding and acceptance. The other was the adoption of the straddling term "neuropsychiatry," a word unsound in structure and weasel in character, an attempt to bring about a shotgun wedding of two respectable specialties which, though good neighbors, are likely to suffer from greater intimacy. Unfortunately, the word has retained currency in the services and the Veterans Administration, but at least was not perpetuated in the naming of the new National Institute of Mental Health.

The Child Guidance Movement, which had started primarily as an outgrowth of the Juvenile Court with William Healy in Chicago in 1909, developed rapidly following the war under the guidance of such men as Lowrey, Levy, and Thom. This movement, based on the study of many life histories, has amply justified itself in its aim of correcting in early life those trends of behavior which, if allowed to go unchecked, may easily blossom later on as fully developed neuroses or psychoses. The state of Illinois, early recognizing the importance of child psychiatry, set up under Herman Adler the Institute of Juvenile Research which has made significant contributions in this field.

The problems of the causation and treatment of the psychoses as well as the neuroses likewise received new impetus; the accent by now had become clearly based upon psychogenetic rather than organic factors. Dunlap, in 1924, had demonstrated clearly that dementia præcox, as it was then still known, does not have a structural basis, and Kempf contributed to further understanding of mental mechanisms. The Kraepelinian concept of dementia præcox was steadily giving way to Bleuler's broader view of schizophrenia, with a resultant increase in optimism concerning the

curability of this, the most common of all the psychoses.

In another field of treatment the malarial therapy of general paresis, described by Wagner-Jauregg in 1918 and introduced to America by White and his associates at Saint Elizabeths Hospital in 1922, placed an entirely different complexion upon the curability of this condition, which had previously been looked on as essentially refractory to treatment. The investigation of this disorder was not placed on a firm basis until 1913, when Joseph E. Moore first demonstrated (as confirmed by Noguchi) the spirochete in the brains of paretics, thus proving the previously suspected syphilitic origin of paresis. Moore's work was probably the most significant step in neuropathology in the present century.

Psychotherapy, particularly of the psychoanalytic type, was steadily gaining ground, and the number of psychiatrists entering private practice and doing out-patient work was constantly increasing. Although there was still, on the part of the public, resistance to psychiatric treatment, whether institutional or extramural, psychiatry was nevertheless definitely coming of age. The official stamping of psychiatry as a specialty came about with the establishment in 1934 of the American Board of Psychiatry and Neurology, the certifying authority in the fields. There are now nearly 2,500 diplomates of this board, all of whom have met certain requirements of experience and training, requirements which are constantly becoming more stringent. The possession of a diploma is already a prerequisite for many psychiatric positions, and will unquestionably become more meaningful as psychiatry develops. Already it may be suggested that no psychiatrist should be permitted to testify as an expert if he is not a diplomate—but a discussion of expert testimony and its abuses would lead us too far afield!

In the field of clinical psychology, the armamentarium was notably increased by the development of the Rorschach test in the middle twenties, followed by a host of further developments in techniques which have increased widely the value of the clinical psychologist to the psychiatrist.

As the known data concerning a scientific topic are developed, further impetus is given to research; as the foundation is broadened and strengthened, a more elaborate superstructure can be raised. Psychiatry has been no exception in this regard. The development of the study of psychopathology, the development of further tools of precision in the nature of psychological tests to be followed later by such means of

observation as the electroencephalograph whetted the appetites of researchers for more knowledge. Clinical studies have predominated in the literature of research, followed in order by more specifically psychological studies, physiological studies, and, finally, studies in the relation of psychiatry to general medicine, sociology, and law. Schizophrenia, which continues to be the terra incognita, has been the principal topic in literature and study and, since 1936, has been the particular subject of investigation under generous grants made by the Scottish Rite Masons of the Northern Masonic Jurisdiction. A recent survey of the literature on schizophrenia for the past ten years lists approximately 3,000 titles! Another study of the literature from 1927 to 1942, a period of fifteen years, revealed that more articles were written concerning epilepsy than any other psychiatric disability except schizophrenia. The work of Lennox, Gibbs, Merritt, and others has done much to shed light upon this disorder which has been described, studied, and feared since the days of Hippocrates, and to bring it under control.

The physiological researches of Sherrington and later of Cannon soon after World War I did much to stimulate interest in the study of the relationships between the emotions and the autonomic nervous system. This study has labored under the somewhat unfortunate title of "psychosomatic medicine"—perhaps "comprehensive medicine" would be a preferable term. Certainly it is no new thing to know that emotional states can produce bodily symptoms, or that the person who is physically ill does not have the same viewpoint on life or the same reactions to his environment as one who is in good health. The term "psychosomatic medicine" was used by German writers over one hundred years ago, and Amariah Brigham in 1838 referred to dyspepsia as a disease of the brain and nervous system; the term is not new, nor should it be thought that psychosomatic medicine is the exclusive prerogative of the psychiatrist. Every physician who is dealing with the sick should have the viewpoint which is expressed by this term—namely, that he is dealing not alone with the body or with the mental reactions of the patient but with a human being whose reactions to a given situation may manifest themselves at all levels of his behavior. Substantial progress has been made in conveying this point of view to the internist, surgeon, gynecologist, and other practitioners of medicine, thanks largely to the work of such writers as Dunbar and Weiss and English.

During the period between the wars, the American Psychiatric Association through Dr. Franklin Ebaugh, the chairman of its Committee

on Psychiatry in Medical Education, and with the generous assistance of the Rockefeller Foundation, has paid particular attention to the teaching of psychiatry in medical schools with a view to integrating this subject with the others taught and impressing upon the budding physician the importance of emotional factors in disease and their amenability to treatment. Along related lines might be mentioned the trend in nurses' training schools toward including psychiatry as part of the training curriculum of the general nurse. At least thirty-eight state hospitals are now operating accredited training schools, and many more give special training courses for attendants.

The outbreak of World War II found about 4,000 physicians in the entire country who indicated (sometimes with not too much basis) an interest in psychiatry. Many of these men were too old for military service, many were occupying important positions in mental hospitals, so that the number of psychiatrists available for the armed forces was far from adequate. The armed forces, particularly the Army, appeared reluctant to make proper use of psychiatrists despite the urging of representatives of the American Psychiatric Association, until the facts of the situation forced upon them the necessity of using this specialty. Brief training courses were finally established and, about eighteen months after Pearl Harbor, the example of World War I was followed by the inclusion of divisional psychiatrists in the tables of organization. Although we are too near the war to acquire any historical perspective, it is evident that psychiatry rendered valuable service. During the years immediately preceding the war, a number of developments in treatment had come about. The prolonged sleep treatment of Klaesi, introduced in 1922, had not been conspicuously successful, but the intravenous use of the barbiturates as an adjunct to psychotherapy had been described by Bleckwenn and Lorenz in 1930, and was developed in the Army under the name of narcosynthesis with great success in the early treatment of acute war neuroses. In the late thirties, the insulin shock treatment of Sakel, the metrazol treatment of Meduna, and the electro-convulsive therapy of Bini and Cerletti had been introduced and had excited great enthusiasm, some of it unfortunately unfounded. The electro-convulsive therapy and a modification of the insulin treatment, developed by Sargent and Slater in England as "sub-shock" insulin therapy, proved themselves of value in military psychiatry. Group therapy of various types had gained attention and was developed considerably in the Army. The well-established principles of out-patient treatment were found to be capable of transplantation to the

Army milieu, and proved themselves to constitute valuable conservation of time and man power. Social workers and clinical psychologists worked together with the psychiatrists in these activities. In the fields, too, of selection and of the maintenance of troop morale, psychiatry played an important part. It is to be hoped that eventually a full account of the contributions of psychiatry will be written and that, in the event of another war, lessons of the recent conflict may not be overlooked again.

If World War I resulted in a growth of interest in the practical aspects of psychiatry, the same may be said on a far greater scale of World War II. Large numbers of the medical officers who served in the Army and the Navy and who, before their entrance into the service, had been ignorant or skeptical of the rôle of psychiatry have learned through experience that the practice of medicine without a psychiatric point of view is incomplete. Many have thus developed such an interest that they are now entering the field of psychiatry. Unfortunately, too many of these veterans have gained the impression that the state hospital has nothing to offer in the line of training. Those who have studied the evolution of psychiatry are well aware that these physicians are laboring under a misapprehension and that actually the remarks of Adolf Meyer in 1909 to the effect that the "hospitals are the sources from which the leaven of proper information and training must come forth" are as true today as when they were spoken nearly forty years ago. There are aspects of psychiatry which must be learned elsewhere than in the mental hospital, but the foundation of the day-to-day contact with psychotic patients and the many facets of their treatment and care is invaluable. The state hospital of today should be not only the center for the training of psychiatrists but also for the training of nurses, social workers, occupational therapists, and theological students. Another by-product of the war is the wider understanding and acceptance by the public of mental disorder, minor or major, as being a medical problem free of stigma or social obloquy. With this understanding has come a far greater readiness on the part of the patient to accept out-patient or hospital care early, and to consult the psychiatrist freely instead of insisting that his "nerves" be treated by a "neurologist."

Fortunately, the public conscience is at last realizing that to fulfill its function as an important link in the social chain, the state hospital needs money, trained personnel, and freedom of professional action without political interference. The Federal Government has at last taken steps to bring about further progress in the care of the mentally ill as regards institutions, clinics, research, and training. The Mental Health Act

of 1946 provides for aid along these various lines and has recently been implemented by a substantial appropriation. This fact is significant as representing the recognition by the Federal Government of the importance of one of the most vast and intricate of social problems, and its readiness to work with the various research centers such as that of Illinois in prosecuting the development of research and training.

The scope of psychiatry has increased beyond all imagination in the last century. Starting with kindly but essentially expectant treatment of the mentally ill in hospitals, it has gained knowledge of the nature of mental disorders and of the influence of the emotions upon the various physical complaints to which human flesh is heir. It has extended into the schools and into the factories; child psychiatry has become a specialty within itself; the private practice of psychiatry has increased enormously, indicating a readiness of persons who are suffering from emotional conflicts to seek advice rather than to attempt to battle out their problems alone and too often unsuccessfully. From being primarily interested in the institutional care of the psychotic, psychiatry has expanded to a study of the motives and the mechanisms of conduct of people in dealing with other people, a phase which has been particularly emphasized and developed by Harry Stack Sullivan and his associates. New methods of treatment have been developed, and a new sense of optimism concerning treatment has grown, with full justification. Psychiatry is now interested not only in interpersonal relations but in international relations and in the social situations and pathological states of mind which bring about the development of dictatorships, national suspiciousness, and aggressiveness. Indeed, the International Congress of Mental Hygiene to be held in London in 1948 is devoted to the topic of world citizenship. There are still schools of psychiatric thought, some of them not too sympathetic with the others. What is needed today is a synthesis such as Masserman has recently attempted—a system which will select and coordinate the best in neurophysiology, psychoanalysis, psychobiology, "psychosomatic" medicine, anthropology, and sociology to bring about the development of a truly American school of psychiatry.

One hundred years is not a long time as history goes, but in the history of psychiatry it has been a period of birth, growth, and evolution to the stature of a specialty of medicine which is interested not only in the whole man but in man's relationships with his fellowman.

A Manuscript of Dominici in the Army Medical Library

DOROTHY M. SCHULLIAN *

THE problem of a prelate's responsibility to his flock in time of pestilence was a burning question which was hotly debated on more than one occasion within the Church itself. No one was more troubled by the moral issues involved than Cardinal Ammannati-Piccolomini, who in an undated letter to Domenico Dominici, Bishop of Brescia, requested a brief statement of Dominici's opinion on the subject:

> I was turning over some writings of learned men of our time on a certain subject, and I came upon the tract of your *correferendarius,* the bishop of Zamora, the whole argument of which is this, that the faithful should not flee places where the pest rages, and that all who do so commit a sin, and the clergy a more considerable sin because the duties of the priesthood have been enjoined upon them. Moreover he refers this sin more to the judgment of God than to that of men and considers the matter not from the field of debate but of conscience. . . . The sum of his many words in my judgment is this, that flight is not permitted for these reasons, that it is against charity and that pestilence is a scourge from God which is to be avoided by a change in living and not by a change of place. This matter struck me when I saw it; if this be true, not only all of us but often whole masses of people are at fault. I remember that in my presence you once said that in such cases flight was not prohibited. And so I ask that if you have time for a short letter you tell me what reason may dictate in this matter to us who are Christians. . . .[1]

This letter, if we judge from internal evidence, was written between 1464, when Dominici was transferred to the bishopric of Brescia by Paul II, and 1478, when he died. It will be dated below by external evidence in the spring of 1468. It so happens that during part of the year 1468 the Bishop of Zamora was Rodrigo Sánchez de Arévalo,[2] who in his *Compendiosa historia hispanica*[3] states quite definitely that on order of Paul II he had issued a tract on the question whether the faithful might rightly

* Army Medical Library, History of Medicine Division, Cleveland, Ohio.

[1] Ammannati-Piccolomini, *Epistolae & commentarii* . . . Milan, Alexander Minutianus, 28 Mar. 1506, f.145a. See also Giovanni Agostini, *Notizie storiche e critiche intorno la vita e le opere degli scrittori veneziani,* Venice, 1752, v.I, p. 425.

[2] Pius Bonifacius Gams, *Series episcoporum ecclesiae catholicae*, Leipzig, 1931, p. 91.

[3] [Rome:] Ulrich Han [not after 4 Oct. 1470], f.185a: . . . Rursus iussu eiusdem Pontificis edidi librum. Vbi agitur an sine peccato fideles licite fugiant a locis ubi seuit pestis: . . . The quotation is from microfilm of the copy in the New York Public Library. See also D. Nicolaus Antonius, *Bibliotheca hispana vetus,* Madrid, 1788, v.II, p. 299, no. 593.

and without sin flee from places where the pest was raging. The tract is listed among his works in an index on f.2 of *Vaticanus latinus* 334,[4] and its text is extant on ff.179-193v of *Vaticanus latinus* 4881.[5] This tract, then, is the one which troubled Ammannati so deeply and to which he requested a reply from his friend Dominici.

Dominici's reply, in turn, is extant in a manuscript of the Army Medical Library which will be numbered 502 in the forthcoming *Catalogue of Incunabula and Manuscripts in the Army Medical Library.*[6] The manuscript was written between 1468, when its second item, *De decimis non exigendis,* was addressed by Dominici on behalf of Paul II to the Doge and Senate of Venice, and 1490, when it was in the possession of one Johannes de Carbonibus of Capena. The tract on the pest, occupying ff.11r-12v, is further dated by a reference in its opening lines to another letter of Ammannati's; this letter, received by Dominici at about the same time as the one on Rodrigo's tract, conveyed to him the Cardinal's praise on the *Oratio pro pace* which he had delivered in Rome on Ascension Day, 1468.[7] After acknowledging his friend's kindness in this respect, Dominici passes to the matter of Rodrigo's tract:

. . . You ask what I feel concerning the opinion of a certain writer that not only for all, but more especially for priests, is it wrong to flee the pestilence, and that this is opposed to charity, and that the judgment of God, from whom such things come to pass, should be changed by prayers and good works rather than by flight. I know that of yourself, in view of your knowledge and the acuteness of your nature, you understand well enough what the feeling should be about this matter, but you have wanted, I suppose, to incite me to rise up against this opinion and write something during this period of leisure. This I would gladly do if the matter had in itself

[4] Marcus Vattasso and Pius Franchi de Cavalieri, *Codices vaticani latini,* Rome, 1902, v.I, p. 239 mention the index, and Padre Anselmo M. Albareda, Prefect of the Vatican Library, confirms in a letter dated 31 Dec. 1946 the inclusion of the pest title.

[5] In the same letter Padre Albareda has furnished the folio numbers and the incipit and desinit for this manuscript; he dates it near the end of the 15th century. Cf. Antonius (Note 3 above) and Bernard de Montfaucon, *Bibliotheca bibliothecarum manuscriptorum nova,* Paris, 1739, v.I, p. 117A, who assigns to this manuscript "varia opuscula" of Rodrigo. I have been unable to confirm as still extant another manuscript of the pest tract credited by Antonius and by Montfaucon, v.I, p. 523E, to the Ambrosian Library.

[6] This manuscript has been hitherto only partially identified; see *Index-Catalogue of the Library of the Surgeon General's Office,* 1909, 2nd Ser. *14,* 237. A second manuscript of Dominici's tract is credited by Agostini (Note 1 above) to *Vaticanus latinus* 4589; Monsignor Robert Devreesse, Vice-Prefect of the Vatican Library, states in a letter dated 3 Sept. 1947 that this manuscript is late, probably 17th century, and that the tract occurs on ff.138v-155v. A third manuscript of the tract is assigned by Agostini to the Biblioteca Capitolare of the cathedral of Padua, B-li; this manuscript survives as A44/Q2 according to a note postmarked 29 April 1948, from Can. Dr. Antonio Barzon, Director of that library.

[7] The edition of Ammannati cited above (Note 1), ff.143b-144b (cf. f.166b). On the *Oratio pro pace* see Agostini (Note I above), pp. 402, 428-432. After its delivery Dominici had sent Ammannati a copy of the oration to read.

anything to awaken doubt in learned and conscientious men, but it is surely unworthy of reply and of discussion among learned men. . . .

Dominici, however, proceeds to furnish a lengthy reply and discussion, setting forth his views with force and heat and supporting them by constant reference to the Scriptures and the Fathers. A few excerpts will reveal the vigor of his sentiments:

. . . Who indeed is so hostile to nature as to be unwilling that men should do what animals do by the instinct of nature? The dolphin flees the storm of which he has a presentiment before it arrives, the kite air which is bad, and many instances of this kind have been collected by those who have written about the natures of animals.

Avicenna . . . and other physicians have taught how to recognize pestilential air from certain properties, so that man may flee it when it has taken on those properties, and now the most potent remedy, flight, is removed. . . .

So I shall ask our author whether, if pestilence is a scourge sent from God, it is right to administer any remedy to the man who is ill. If you say it is not, you contradict the Scripture, for we read in Ecclesiasticus [38:4,7][8] that "the most High hath created medicines out of the earth: and a wise man will not abhor them. By these he shall cure and allay their pains: and of these the apothecary shall make sweet confections." . . . Isaias [38:21] too ordered "that they should take a lump of figs [to Ezechias] and lay it as a plaster upon the wound, and that he should be healed." If then it is right to drive something away when it comes, without any doubt it is also right to keep it from coming. Whence then do you claim that it is wrong to avoid the pest by flight? For if I may heal myself with a remedy I may also preserve myself with one. What difference then whether I preserve myself with a drug or with flight? . . .

What profit is it [you say] to flee a pestilence sent from God when no one can escape his hand? . . . The psalmist [Ps. 138:7] said, "Whither shall I go from thy spirit? or whither shall I flee from thy face?" . . . If he has ordained death, surely no one can escape, but I who flee the pestilence believe surely that he has not ordained my death. Those [who believe otherwise] embark upon a sea of predestination and prescience on which they know not how to navigate forsooth if they are in danger. Suppose I say, "God has decided to rescue you from the pestilence or to destroy you by it. If the decision is rescue, what need is there of flight, if destruction, how can you flee?" But this argument is like the one that God has ordained eternal life for me. What need then that I live a good life? Or he has ordained damnation. What need then that I abstain from sin or busy myself in good works? But I say that he has ordained that you win your own salvation, and that you do so in this way, with good works. Hence Peter [2 Pet. 1:10] said, "Wherefore labour the more, that by good works you may make sure your calling." . . . Likewise I shall say that he has ordained your rescue from the pestilence, and in this way, by flight. . . . If you deny anyone the right to flee, you must also deny him the right to summon a physician or to ask for drugs, which is absurd. . . .

Between man and beast there is this very great difference, that the beast adapts

[8] Biblical translations are from the Douay version as published by the Douay Bible House (New York, 1946).

himself only to that which affects his senses, while man . . . sees the causes of things and their progress, is not without knowledge of their antecedents as it were, compares their likenesses, connects them with what is at hand and what is to come, easily sees the course of his whole life, prepares what is necessary to live it; moreover man, who is a sharer in reasoning and not only knows the present but remembers the past and has foreknowledge of the future, understands that bad air is harmful and that the disease of the pestilence is contagious. Why then, acting according to reason and directing his works to a fixed end, will he not avoid and flee it? . . . It was directed that lepers be sent outside a town not only because they were unclean according to law, for many others were unclean according to law and were not sent outside, but because they could infect others. . . .

What will my opponent say to the passage from Ezechiel [14:21-22], "For thus saith the Lord: Although I shall send in upon Jerusalem my four grievous judgments, the sword and the famine and the mischievous beasts and the pestilence, to destroy out of it man and beast, yet there shall be left in it some that shall be saved, who shall bring away their sons and daughters." Here then is salvation from the pest, to bring away sons and daughters, and just as it happens that pestilence comes from the wrath of God, so it happens that in his clemency some go out from it and not all perish. . . .

Why should one say that to flee the pestilence is to act against charity, as if by our flight hospitals would be abandoned, alms perish, men remain without physicians, without treatment, without beds, without drugs? . . .

It is necessary that a bishop or a parochial priest sow the word of God and administer the sacraments, for this is a duty imposed on him by his office. Perchance he will do it more suitably through another than through himself. Why then do you say that you are not permitted to depart, since you must preach? Someone will say, "Cyprian in a letter [Epistula I? See the edition by Guilelmus Hartel in *Corpus scriptorum ecclesiasticorum latinorum,* v.III, Pars II, Vienna, 1871] reproves pastors who flee in this way and abandon their flocks." This is surely reprehensible if in fleeing they do abandon their flocks, if there is no one else to perform their duties equally well. . . . Innocent III in the *De officio ordinarii* . . . says [*Corpus iuris canonici,* v.II. Colonia Munatiana, 1695, coll.155-6] . . . that when, as often happens, bishops because of manifold duties or bodily weaknesses or incursions of the enemy or any other occasion are unable to give the word of God to the people, they are to accept other men suitable for exercising this duty. . . .

With such arguments Dominici lashes out at Rodrigo's tract.[9] Twelve folios later, realizing that he has overstepped the bounds of a "short letter," he apologetically brings his remarks to a close:

You have, most reverend father, my opinion on this whole matter, in which I see that I have exceeded the limits set for a letter and drawn up a tract. Somehow my pen flowed along and I wrote these lines in one sitting when I first saw your letter. After I realized that they had grown into a volume, I was stricken with

[9] Presentation of his complete line of reasoning must await a critical edition of his text.

remorse but none the less, since I know that you gladly read anything of mine, even when it is inept, I gave the tract to a notary for transcription. Even though my remarks get at the root of the matter, they are nevertheless barren for this reason, that thinking I was going to Brescia I packed away all my books except the Bible. I would have refuted the other arguments of our friend if they had been known to me, but I have seen nothing of his book beyond what you wrote of it. If you wish anything else from me you will not ask in vain. Here every day eighteen or twenty die. The departure of the Pope is as yet uncertain. I shall betake myself to a nearby town. Farewell.

The cycle—Rodrigo's tract, Ammannati's request to Dominici for an answer and Dominici's reply—is completed with a note of gratitude from Ammannati. Written at Piacenza on 12 July 1468, it narrows the date of composition of Ammannati's letter of request and of Dominici's tract to the few weeks between Ascension Day and 12 July. Its full acceptance of Dominici's arguments is emphasized by the plea that Dominici himself depart to a place of safety:

You have abundantly satisfied my desire, and my mind is put at rest by your arguments. . . . I shall thank you more fully when I see you; at a distance from you, I give you what thanks I can and ask that you follow your own doctrine and prepare a retreat for yourself where, with your circle, you can avoid the coming August; the month is always noxious at Rome, and this year it is also pestilential. . . .[10]

[10] The edition of Ammannati (f.147a) and Agostini cited above (Note 1).

Some Stages in the Development of Tuberculosis Therapy in the Lower Mississippi Valley

WILLIAM DOSITE POSTELL *

The Pre-Sanatorium Era

THE history of tuberculosis according to Sir William Osler may be divided into four periods. The first extends from the dawn of history to about the middle of the seventeenth century; the second covers the remainder of the seventeenth century and the eighteenth; the third, roughly the first three quarters of the nineteenth century; and the fourth, from the time Jean-Antoine Villemin (1827-92) proved the inoculability of tuberculosis (1864-69) to the discovery of the tubercle bacillus by Robert Koch (1843-1910) in 1882.

Study of the earliest medical literature that mentions tuberculosis indicates that the situation existing in the Lower Mississippi Valley in respect to tuberculosis was about the same as in the rest of the world. Until the 1840's the local medical literature is barren of reference to tuberculosis—so much so that one may erroneously conclude that phthisis was unknown in the early medical history of this section, but this was far from the case. Tuberculosis was present and persons were dying from it, but it was so much less spectacular than yellow fever, cholera, or the various types of fevers then prevailing, that the medical and lay public were not conscious of its destructive force.

It was during the 1840's that mention began to be made of the ravages of tuberculosis and of the various therapeutic measures for its control. The conditions existing during the third period in the history of tuberculosis prevailed to a large extent in the South. Therapy consisted in the use of iodine, potassium, chlorine, iron, cod-liver oil, and the gases—carbon dioxide, oxygen, nitrogen, and hydrogen. The local medical journals during the forties and fifties were filled with the merits of these agents in the therapy of tuberculosis. Papers taken from domestic and foreign publications were reprinted in local journals, advising the physicians of advances in therapeutic measures. From the various case histories and from

* Louisiana State University School of Medicine.

the descriptions of diagnostic methods, one is aware that the art of percussion was well known in the South. However, the value of auscultation seems to have been recognized much more slowly, as was the case in many sections of the United States.

The first publication on tuberculosis to be issued in the Deep South was so interesting that an examination of its contents is desirable. In 1844 there appeared a fifty-four-page pamphlet entitled *Consumption Curable!* by Dr. Hall.[19] Just who Dr. Hall was cannot be ascertained with any degree of assurance. He states in this pamphlet that he is a resident of New Orleans from November first until May first of each year. In the Index-Catalogue of the Surgeon-General's Office, there are listed a number of pamphlets with similar titles by a Dr. William Whitty Hall (1810-1876), so one may suspect that he was also the author of *Consumption Curable!*

In the beginning of his pamphlet, Dr. Hall gives a general description of consumption for the public. The account appears adequate, but it comes rather as a shock to find this introductory statement to the section entitled, "What do you do for consumption?"

> The most interesting reply, at least to the patient is—I cure it! Tubercles are absorbed, taken away or encysted. Large cavities are encased, small ones healed up. This is done in a manner not disagreeable, Calomel, Emetics, Blisters, Caustics, Seatons and Tissues, not being used. It is accomplished by a method unknown to the world, until within a short time past, and the success which has attended the judicious employment of the means used, has been uniform, and encouraging, in the highest degree. Already there are men of high moral worth, all over the Union, who are prepared at any day or hour, when properly approached, to bear a decided, and grateful testimony in its favor[19] [p. 18].

The author then describes how simple and beneficial is his treatment. Most patients require only one or two visits to his office, although a few must make several visits over a period of some weeks. He next cites a number of cases which he had treated and cured. In some instances patients were suffering from troublesome coughs, night sweats, and bloody sputum, but always after he prescribed for the sufferers immediately they became better and were eventually restored to health. There were several testimonial letters from grateful patients attesting to their cures.

What was the basis of his therapy? When it came to divulging his remedy or treatment, Dr. Hall had this to say:

> It is not designed at present to communicate the means employed. . . . Let it, however, be distinctly noted, that I am at any time under proper circumstances, perfectly willing to communicate all I yet know, to any well educated young phy-

sician of genius, talent, of a towering ambition, who will give suitable guarantees, that he will devote his whole life, exclusively, to the mode of practice adopted by me, and to its improvement, in the treatment of this one disease. . . .[19] [p. 23].

Another cure for consumption which was practised prior to the War between the States was known as the "sugar-house cure." It was common knowledge among the sugar planters in Louisiana that during the grinding season those workers and slaves employed in the sugar house gained weight, became cured of any bronchial disturbances, and improved in general health. Aware of this, Dr. Samuel A. Cartwright, one of the most eminent physicians of the Deep South, began recommending to those suffering from chest complaints that they spend several weeks during the grinding season in the sugar house, drinking cane juice and inhaling the vapors from the kettles. Dr. Cartwright reported some remarkable successes by this method of treatment. His patients gained weight, in one case as much as fifteen pounds in three weeks, their coughs disappeared, and at the end of the season their health was very much improved. Dr. Cartwright made no fantastic claims. He clearly stated that those suffering from advanced tuberculosis could expect no relief or cure by this method. However, so much publicity was given to this "treatment" that the sugar houses were soon swarming with those seeking a cure, until the owners began to complain that their refineries were becoming nothing more than dispensaries. Also, it was becoming very inconvenient to have patients die on their hands.[6]

Probably the clearest statement of what was taking place in the diagnosis and treatment of tuberculosis at this period was that made by Dr. A. Hester, then editor of the *New Orleans Medical and Surgical Journal.* Hester, in reviewing the book entitled *The Young Stethoscopist,* made this comment:

But notwithstanding the perfection in our diagnostic means in thoracic disease, have we advanced the treatment thereof in anything like the same ratio? Has any method been devised by which a cavity can be made to cicatrize and heal; by which tubercles can be driven from the lungs, or, in a word, by which any serious organic disease of the lungs or heart can be permanently cured or even relieved? With a few exceptions we can answer these questions in the negative. We do not, however, despair that the time will come when many of these diseases, now considered incurable, will be made to yield to a more enlightened and rational system of therapeutics[20] [p. 66].

On the other hand, this early period was not without its advances.

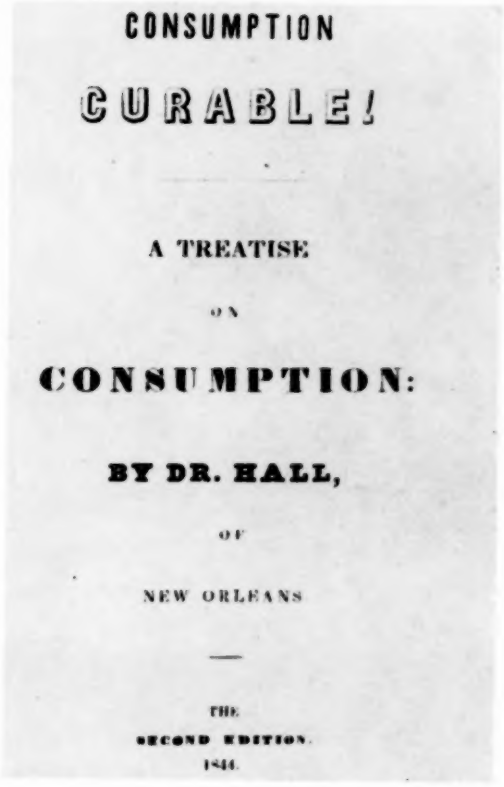

Fig. 1. Title-page of *Consumption Curable!*

Fig. 2. The Dradom Tuberculosis Sanatorium

Following in the footsteps of the great French clinicians, tremendous progress was made in the diagnosis of diseases of the chest. The New Orleans School of Medicine had as a member of its faculty a professor of clinical medicine and auscultation and percussion, Dr. Austin Flint, who was one of the authorities in the United States on the diagnosis of chest disorders. Flint held this professorship in the New Orleans School of Medicine for a few years, and also gave private lessons in the art of percussion and auscultation. Undoubtedly, he was in some measure responsible for promoting the use of the stethoscope in this region.

We also find that during this period one physician, a Dr. Richardson, maintained that tuberculosis was a disease of youth and the best cure was prevention. Diet and rest were recommended by some practitioners and in one instance Richardson stated that the patient must be in a suitable frame of mind for treatment to do the most good. At the end of his paper he outlines a hygienic code for management of consumptives which includes such provisions as rest, proper diet, exercise, and cleanliness, which is all sound, but he adds this note of warning to female consumptives, "marriage of consumptive females for the sake of arresting the course of the disease by pregnancy is morally wrong and physically mischievous."[27]

During the Civil War, and for many years following, medical culture made little progress in the South. It seemed as if making a living were such an arduous task that very little time or leisure could be devoted to the cultivation of the arts and sciences. One might say for this era that a hiatus existed as far as advances in medicine were concerned.

The next twenty years in the history of tuberculosis were concerned with the fight over the recognition of the bacillus as the cause of the infection. Although Koch discovered the bacillus in 1882, many years were to pass before its importance as a causal factor in tuberculosis was generally accepted throughout the medical world. The controversy over its acceptance involved the best medical minds of that day and had its counterpart in the South. Dr. H. D. Schmidt, a German immigrant and pathologist for the Charity Hospital in New Orleans from 1875 to 1887, was one of those in the State who first opposed the acceptance of the bacillus. However, it was Dr. Schmidt who first introduced the study of bacteriology to a New Orleans group. Gathering a number of young internists, as they were then called (among whom were Drs. Rudolph Matas, P. E. Archinard, A. McShane, LaPlace, and LeBlanc), Schmidt

organized them into what may be called the first pathological society in New Orleans and gave them their first introduction to bacteriology. In time, so great became the controversy over the recognition of the bacillus as the cause of tuberculosis that Dr. George Lawrason was finally sent to Philadelphia to have the causal relation demonstrated to him. He was probably the first New Orleans physician to have this privilege.*

Another controversy that developed at this time was over the use of tuberculin as a vaccine. During the nineties, Dr. Karl von Ruck of Asheville, North Carolina was a strong advocate of the use of tuberculin therapy. He maintained a sanatorium at Asheville where many tuberculous patients from the South were sent for treatment. In October, 1895 a committee from the Orleans Parish Medical Society composed of Drs. J. H. Bemiss, J. B. Elliott, Sr., Joseph Holt, A. J. Bloch, H. S. Lewis, Edmond Souchon, J. D. Bloom, Rudolph Matas, F. Loeber, C. Chassaignac, C. J. Landfried, A. McShane, P. E. Archinard, and O. L. Pothier, invited Dr. von Ruck to New Orleans to demonstrate the use of antiphthisin, as tuberculin was then known. The experiment was commenced in November, 1895. All cases, medical and surgical, were examined by their respective committees, in conjunction with Dr. von Ruck. The average duration of the observations was from two to three months. The commission presented its report to the Society at the regular meeting held March 28, 1896, about four months after the inauguration of the trial. The committee reported that, from the tests, the curative value of antiphthisin was inconclusive and, as a whole, unproven although some benefits from its use were obtained in early cases.**[29]

Also during this time many fantastic remedies were brought forth for the cure of tuberculosis. Among them may be mentioned such therapy as living in dairies breathing the dung of cows, the taking of innumerable baths, the breathing of chloroform, and the use of various serums. There was also the diet treatment which in one case consisted in the eating of large quantities of oysters and grapes, the consuming of large and frequent doses of hot water, and the eating of carefully chopped beef and stale white bread. Then let us not forget "Angier's Petroleum Emulsion" which claimed (i) to antagonize the progress of the disease; (ii) palliate the symptoms, relieve the troublesome cough, reduce fevers, and eliminate night sweats; (iii) pacify the irritable stomach, and make it receptive

* As related to the author in an interview with Dr. Rudolph Matas.

** Also related to the writer by Dr. Rudolph Matas.

to food and medicines. The merits of this "Emulsion" were extolled in medical journals of 1905. Another remedy which had many supporters was the administering of creosote. Dr. E. M. Dupaquier in the *New Orleans Medical and Surgical Journal* (July 1903) gave a rather extensive review of the history of this therapeutic agent, the means employed by him in the administering of this drug, and his results.[14] But all of these remedies had their day. Some were in vogue longer than others, but in time all gave way before our modern concept of sanatorium treatment and the employment of pneumothorax and surgery.

With regard to the incidence and mortality of tuberculosis in the South during this Pre-Sanatorium Era, it is rather hard to obtain a clear picture of the situation. Statistics are available, but just how far one may rely on them is problematical. However, since they do permit some interesting speculation they are here presented.

In 1857, Dr. Samuel A. Cartwright in a paper on the treatment of pulmonary consumption made this interesting comment: that among the frontiersmen of the South he rarely saw a case of consumption, and it was only when he began to practise in the cities that he observed the high incidence of tuberculosis. He attributed this to the simple and wholesome life led by the frontiersmen in contrast with the life of indolence and ease of the city dwellers which lessened their resistance and invited infection.[9]

In the *Preliminary Report of the Mutual Life Insurance Company of New York from 1843 to 1874,* some interesting figures were reported as to the mortality from consumption among their insured. According to this report there were 5,224 deaths for that period with a total of 920 dying from consumption. This gave a percentage of 17.61. In the states from Maine to Connecticut there were 166 deaths, a percentage of 20.10. New York reported 262 deaths, percentage 17.81. The states from Delaware to Texas, which included the Atlantic and Gulf Coast states, reported 70 deaths with a percentage of 16.24. Kentucky, Tennessee, Missouri, and Arkansas with 28 deaths, a percentage of 11.02, were still lower. If one is to judge from these figures, it would appear that the South had a lower number of deaths from consumption than the North and East[32] [p. 33].

Dr. Bennett Dowler published a paper in 1850 purporting to show the favorable ratio of deaths from consumption in the South as compared with the North. According to his statement, the official census of Boston for five years ending with 1854 showed that there was one death from

consumption in every six.* Also in the *Official Registry Report of Rhode Island for 1855,* 21.23 died of consumption in every one hundred deaths[11] [p. 317].** He takes issue with the statement of Dr. Edward Hall Barton, a New Orleans physician, that phthisis is more rife in the South than in the North, and quotes from a paper of Dr. Barton in which he (Barton) gives the percentage of deaths from phthisis to total mortality in cities of the United States as follows: Philadelphia, 14.84 per cent; New York, 17.50; Baltimore, 18.20; Charleston, 18.27, and New Orleans, 9.37[8] [p. 85].

Barton in 1849 reported the ratio of deaths from tuberculosis in New Orleans to be 1 in 16.65, and in 1854 in his *Report on the Sanitary Conditions in New Orleans* he gave the ratio 1 in 20.7[4] [table opposite p. 460], but Dr. Dowler[11] [p. 322] states that Dr. J. C. Simonds, another New Orleans physician, reported the ratio 1 in 13.33†[28] [p. 72].

Quoting from the seventh census of the United States, 1850, Dr. Dowler presents these figures: Alabama, 1 death in every 25.11 from consumption; Louisiana, 1 in 19; Maine, 1 in 4.45; Georgia, 1 in 35.57; Massachusetts, 1 in 5.37; South Carolina, 1 in 30.‡ Dr. Dowler makes this comment concerning these figures: "Consumption gives a ratio of deaths, compared to the whole mortality, about eight or nine times higher in Maine than in Georgia! Massachusetts nearly four times more than Louisiana—five times more than Alabama—seven times more than South Carolina!"[11] [p. 316].

Dr. Dowler in closing his paper makes this statement in regard to the probable error:

> It may be allowable once more to say that it is absolutely contrary to the fundamental laws of probability, that the United States' marshals employed in taking these mortality statistics of the year 1850, should have all erred in the same manner in their enumerations concerning the deaths from consumption throughout this vast Republic. It transcends the possibilities of the doctrine of chance, that there should be a material error among so vast an assemblage of facts collected at the same time, under similar circumstances, without collusion, and without a motive to deceive[11] [p. 323].

* This statement was verified (pp. 60-61) in *Report of the joint special committee on the census of Boston,* May 1855 . . . Boston, 1856. Deaths due to consumption 3,421; total deaths 19,983; roughly one in six.

** This statement was verified (p. 21) in the *Third report to the General Assembly of Rhode Island, relating to the registry and returns of births, marriages, and deaths, in the State of Rhode Island, for the year ending December 31, 1855* . . . Providence, 1856.

† In checking Dr. Simonds' tables it would appear that the ratio was more approximately 1 to 11.9 instead of the figure given by Dr. Dowler.

‡ Dr. Dowler's figures were verified (*Mortality statistics of the seventh census of the United States,* 1850). Very little discrepancy was noted. These were: Louisiana, 18.6; Georgia, 32.0; Massachusetts, 5.66; South Carolina, 30.1; Alabama and Maine figured the same.

On the other hand, although Dr. Daniel Drake reported the mortality from consumption in cities of the United States as follows: Boston, 1 to 11.20; New York City, 1 to 8.00; Baltimore, 1 to 5.60; Charleston, 1 to 7.20; and New Orleans, 1 to 13.60; he was of the opinion, probably influenced by military statistics, that deaths from consumption were greater in the South than in the North and he further stated that in New Orleans the ratio of deaths was 71 per cent greater than in Boston[13] [v.2, pp. 885, 890].

With regard to the incidence of tuberculosis among Negroes, the consensus among many Southern physicians was that tuberculosis did not prevail to any great extent among Negroes until after the Civil War, but this is a controversial issue.

In the plantation records of the Minor family who owned plantations in Louisiana and Mississippi it was found that on Waterlow Plantation there were listed 127 deaths among the slaves from 1834 to 1857. The cause of these deaths is given, and in only four cases was death attributed to consumption. In the same family records for Southdown Plantation, there were recorded 31 deaths between the years 1852 to 1858, only one attributed to consumption.[25]

In the Louisiana State Board of Health reports for this period the statistics for New Orleans are as follows:

Mortality from Pulmonary Tuberculosis[1]
New Orleans

	Deaths		Population		
	W	N	W	N	
1849	445	147	91,431	28,029	
1850	528	146			
1853	582	173			
1877	513	375	140,923	50,456	(1870)
1880	517	346	158,367	57,617	
1883	501	344			
1885	544	402			
1887	434	339			
1890	444	380	177,376	64,491	

One cannot but notice the difference between the deaths among Negroes prior to the war and afterwards. The mortality more than doubled for Negroes although there was little change in the white, notwithstanding the increase in population. The ratio of deaths of the Negroes and whites from consumption seems to have been about the

same before the war. This also seems to have been the case in Charleston, South Carolina[22] [p. 118].

Although the data presented are interesting, one can prove very little from them. We would probably be right in agreeing with Dr. Joseph Jones who summed up the tuberculosis situation in Louisiana as follows:

> We have thus during a period of thirty-one years, 1845-1880, a grand total of 22,598 deaths by phthisis-pulmonalis.
>
> Surely a disease which steadily and remorsely claims its victims each year, which in any long series of years has been as destructive as the dreaded yellow fever, should secure the earnest consideration of those charged with the sanitary affairs of this city....
>
> In comparison with phthisis-pulmonalis, which every year destroys its thousands in every State of this Union, yellow fever should be regarded only as a casual and minor disease, visiting only certain limited portions of the tropical and temperate regions at long intervals. We hear much of the cost of epidemics, but nothing as to the fearful cost of such diseases as phthisis, which holds its doomed victims in its deadly embrace for months and even years, and inflicting, in addition to indescribable tortures, vast and ruinous pecuniary expenses[21] [v.3, pt.1, ccci].

DR. WALLACE JOSEPH DUREL AND THE SANATORIUM MOVEMENT

The sanatorium movement first inaugurated in Germany received its greatest impetus in America through the efforts of Dr. Edward Livingston Trudeau (1848-1915), to whom the world owes so much in its fight against tuberculosis. Trudeau's father, Dr. James Trudeau, a native of New Orleans, resided for a time in New York City but returned to the city of his birth shortly before the Civil War. The elder Trudeau had a rather diversified career. He was gifted at painting and modeling in clay, and in the war held the rank of Brigadier-General in the Confederate Army. He disposed of his library before leaving New York, and it is now a part of the collection of the Library of the New York Academy of Medicine. After his return to New Orleans he apparently began to assemble another library, and the remains of this one are now in possession of the Library of the Louisiana State University School of Medicine.

Dr. Edward L. Trudeau contracted tuberculosis when a young man and, hoping to obtain some benefit from a life in the open, he retired to the Adirondacks where in time his health improved. It was in 1882, while reading in Anstie's *English Practitioner* an account of Brehmer's Sanatorium in Silesia and a discussion of his views as to the value of

sanatorium treatment in pulmonary tuberculosis that the idea occurred to him of building a sanatorium at Saranac Lake.

The first cottage of the Saranac Lake Sanatorium for the treatment of tuberculous patients was completed in 1884, and from this modest beginning has grown the Trudeau Sanatorium, the Trudeau Laboratory, and the Trudeau School of Tuberculosis. About six hundred sanatoria have been built in America with this institution as a model, and several hundred physicians have been trained in the most approved scientific methods in the fight against tuberculosis.

While Dr. Trudeau in the woods of New York was making his fight for the establishment of a sanatorium for the treatment of tuberculous patients, the situation in the Lower Mississippi Valley in regard to tuberculosis control was serious. An examination of the records of the Health Department of the City of New Orleans for the year 1902 shows a death rate of 349.5 per 100,000 from tuberculosis (all forms). This compares with a death rate of 211.6 (pulmonary) for New York City in 1903, and a death rate for the United States in 1900 of 194.4 (all forms) or 173.3 (pulmonary)—surely not a very encouraging picture.

However, if the outlook was black in this section, at least it was encouraging in respect to an awakening among physicians and laymen as to the importance and magnitude of the problem confronting them. The year 1902 may be considered an important date in the history of tuberculosis in the Lower South for in the October number of the *New Orleans Medical and Surgical Journal* of that year there appeared four papers, three of which were of some significance in that they seemed to typify the interest in tuberculosis control manifested by the medical profession in this region.

One of these papers was entitled "Vital Statistics of Tuberculosis in Louisiana." Realizing the need for some record as to the incidence of tuberculosis in the state, Dr. G. Farrar Patton, Secretary of the Louisiana Board of Health, forwarded a circular letter to all registered physicians requesting them to fill in the enclosed blank relative to the prevalence of tuberculosis in their practice. The Board was disappointed in the results of this attempt to obtain a picture of the situation in Louisiana, for, out of 365 physicians in New Orleans, only 15 responded. In the other 58 parishes, only 138 of the 1,007 registered physicians sent in their reports. Obviously an attempt to compile statistics from the small group reporting was useless. Notwithstanding the lack of cooperation on the part of the

medical public, Dr. Patton made the comment that it was well known that the incidence of tuberculosis in the state was very high. He went on to say that the greatest need was for health education. This crusade, as he referred to it, would be essentially one of public education, and he particularly urged that an officer be appointed by the legislature to be known as a Commissioner of Hygiene whose duties would be largely educational. As Patton stated: "With respect to tuberculosis the need for such popular education is so obvious that to neglect it is little short of criminal."[26]

Another significant paper was the one by Dr. F. M. Thornhill, who attempted to show how badly needed was a program of health education for the public. He stated that, regardless of the fact that the cause of tuberculosis had been discovered twenty years previously, therapeutics had not kept pace with the knowledge of diagnosis and the etiology of the disease. This being the case, the public was badly in need of instruction as to the infectious character of tuberculosis and how best to avoid being infected. Thornhill then went into more detail as to how this health educational program should be undertaken, showing remarkable insight into the problems facing the state in arresting the spread of tuberculosis.[30]

Dr. J. M. Barrier of Delhi, Louisiana, presented a rather appalling picture of the situation among Negroes and how badly needed was some improvement in the sanitary condition of the race. According to his account he had seen only two cases recover in the hundred or more he had treated. Becoming interested in the tuberculosis problem among Negroes he had solicited and received reports from 80 physicians from various localities and of the 253 cases reported, 37, or 15 per cent, improved under treatment, and 170, or 70 per cent, died.[2]

The fourth paper by Dr. W. F. Couvillion of Marksville, Louisiana, was an interesting account of the treatment of tuberculosis. He advocated the elimination of practically all drugs (even guaiacol, creosote, and cod-liver oil, which had been to some extent popular) and advised his patients to live in the open and eat wholesome and nourishing foods. Evidently the newer methods of treatment were becoming known and appreciated by the physicians of this region.[10]

In a later number of the same journal, Dr. E. D. Fenner presented a paper on the diagnostic value of tuberculin. He merely reviewed the literature which revealed that on the whole those who had used tuberculin were impressed with its diagnostic value. In the discussion that followed

the presentation of this paper, the consensus of those present who had used tuberculin themselves or seen its use demonstrated was in agreement as to its value in the diagnosis of tuberculosis.[18]

As mentioned before, these papers seem to indicate that many physicians were aware of the situation then prevailing and also of some of the problems confronting them. They also had some acquaintance with the latest advances that were being made in the treatment of tuberculosis. This was borne out in a modest announcement which appeared in the November, 1904 number of the *New Orleans Medical and Surgical Journal*: "The Louisiana Tuberculosis Sanitarium at Covington, La., is to be opened sometime during December for the modern care and treatment of consumptives."[23]

Thus twenty years after the founding of the first sanatorium in the United States for the care of tuberculous patients, the first sanatorium was founded in the Deep South. In a later announcement, Dr. Wallace Joseph Durel was listed as the medical director and Drs. John B. Elliott, Jr., Homer Dupuy, Hermann B. Gessner, J. A. Storck, E. M. Dupaquier, and F. W. Parham as the consulting staff. The sanatorium was located in the piney woods two miles from Covington and was to be devoted exclusively to the treatment of tuberculosis.

Dr. Wallace Joseph Durel (1877-1935), who had the courage and foresight to establish this sanatorium, may well be called the "Trudeau" of the Deep South. Durel's life and career exhibited many parallels to that of Dr. Trudeau. Both were infected almost at the beginning of their medical career; both owed their apparent recovery to rest; both established sanatoria; both devoted their lives to treating tuberculosis and advancing our knowledge of the disease; and both had the greatest virtue of all, that of "charity."

Durel had contracted tuberculosis soon after graduating from the Medical Department of Tulane University in 1897 and had entered a sanatorium for treatment, but becoming dissatisfied with his progress he returned to New Orleans and treated himself with good results largely by the rest cure. On his recovery he decided to devote his life to those suffering from the "white plague." Thus he became the first physician in the Lower South to specialize in the treatment of tuberculosis, or the first "phthisiotherapist" as the specialist was called in the early literature.

On the tenth anniversary of the establishment of his sanatorium,

Durel issued a report dated April, 1915 which contained the following statement:

> The 'basic' treatment, consisting of rest—rigorously applied, and followed, at the proper time, by well regulated exercise; a liberal and careful dietary; a faithful adherence to the open-air life.
>
> The 'Auxiliary' treatment, comprising the following medicinal measures: Beechwood Creosote, Iodides, Blistering, Topical resolvents, etc., when indicated. Tubercle Bacilli products (Bacilli Emulsion mostly) in the majority of cases, were carefully administered—regulating the dosage by the Neutrophilic (blood) Index. The correction of a secondary anemia, and of any symptomatic disturbance or complication, tended decidedly to improve a great number of cases.
>
> Artificial Pneumothorax has been used recently in cases with large abscess cavities, and in hemorrhagic cases.[15]

During the ten years of the sanatorium's existence, 166 patients were treated and their cases were classified and reported according to the Schema of the National Association for the Study and Prevention of Tuberculosis. In summarizing his results, Dr. Durel noted two interesting features: (i) The permanency of the apparent cures in the large majority of cases; (ii) In no instance had a well member of a family developed symptoms of tuberculosis after the patient had returned to his home surroundings.

We read in this report that Durel had already begun the use of artificial pneumothorax. This is very interesting for it places him among the very early physicians who used this method of treatment in the United States. The pneumothorax apparatus devised and used by Durel was undoubtedly the first apparatus of its kind in the Deep South.[16] Fortunately a photograph and drawing of this apparatus were obtained from Dr. Eugene Durel (Fig. 3). For a description of this apparatus, as well as other pertinent information regarding his father, we quote from the letter[17] which accompanied the photograph:

> I have again searched thru my Father's papers in an effort to find some references to the origin of the name Dradom but have been unsuccessful. No one in the family is able to recall the exact meaning, but it was a name made up by Daddy from the words 'diet, rest, and fresh air' which was his basic therapy in all cases.
>
> I am sending you a picture of a portion of his office at the Dradom with the original type pneumothorax apparatus on the center table. I say 'original type' because the bottles first used were inverted, graduated liter bottles with two-hole rubber stoppers admitting glass tubes extending deep enough into the lower bottle to permit the egress of air without allowing water to enter the tubing. The Kelly douche bottles later used eliminated quite a bit of glass and rubber tubing but the principle remained the same.

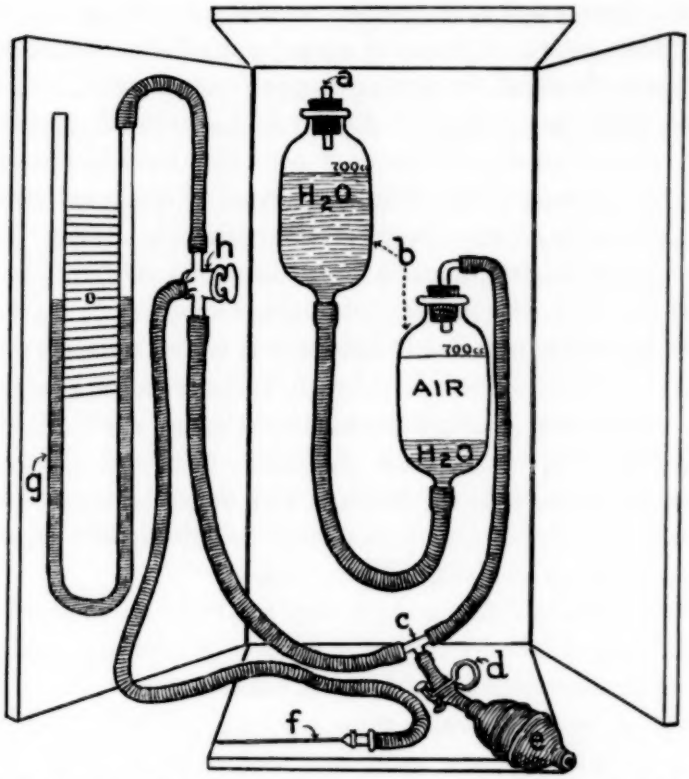

Fig. 3. The original pneumothorax apparatus of Dr. Wallace Joseph Durel

I am not much of an artist but I have attempted to sketch the apparatus in such a way that you can understand its operation. When the three-way glass petcock is in an upright position the needle in the patient's pleural cavity is directly connected to the manometer to obtain pressure readings and the tube leading from the lower bottle is shut off. Turning the valve to the horizontal position shuts off the manometer and connects the needle direct to the lower bottle so that the water entering from the upper bottle forces air thru the tube into the pleural space. Pressure readings can be checked merely by turning the petcock to the proper position....

I do not know of any other reports of the Sanatoria besides the ones I sent you but I am sending some views of the Dradom showing the northeast exposure and our home in the background and one showing the open sleeping-porch where Daddy required his patients to sleep at all times.... Sincerely, Eugene G. Durel, M.D.

In February, 1920 Dr. Durel built a new sanatorium on Riverside Drive, Covington, Louisiana which he called "The Dradom Sanatorium," and which has been referred to in his son's letter. In 1923 Durel issued a report covering the work of his sanatorium since its establishment. His results in treating 227 cases were as follows: *Minimal stage* (30 cases), apparently cured, 30 cases or 100 per cent; *Moderately advanced stage*

(84 cases), apparently cured, 77 cases or 91.6 per cent, quiescent, 6 cases or 7.2 per cent, improved, 1 case or 1.2 per cent; *Far advanced stage* (113 cases), apparently cured, 24 cases or 21.3 per cent, arrested, 1 case or .9 of 1 per cent, quiescent, 44 cases or 38.9 per cent, improved, 35 cases or 30.9 per cent, non-improved, 9 cases or 8 per cent. Sixty-nine deaths were reported, the primary cause being as follows: Pulmonary tuberculosis, 53 cases; pulmonary hemorrhage, 2 cases; diabetes, 2 cases; empyema, 2 cases; laryngeal tuberculosis, 5 cases; intestinal tuberculosis, 5 cases; abscess of the lung with surgical drainage, 1 case.[12]

It is of interest to note that Durel not only looked upon his sanatorium as a means of treating those infected with tuberculosis, but as also valuable from an educational standpoint. Accordingly, he states: "The Report evaluates the educational phase of Sanatoriums and Clinics in the prevention of tuberculosis, as manifested by the insignificant number of cases of tuberculosis developing in members of the family or immediate circle of any patient discharged."[12]

Dr. Durel found time during a busy life to be active in professional circles. He also published a creditable number of clinical papers of which at least twenty have been found listed in the literature.

It may prove of interest to those who are concerned with the value of tuberculin as a diagnostic agent that in discussing a paper in 1929 by Dr. W. R. Buffington entitled "Ocular Tuberculosis," Durel made this comment:

> People of eminence have talked of the danger of using this agent, tuberculin, for diagnosis and until recently I was almost the only man in the South who was willing to use it; in my thirty years of work I have yet to see any deterimental [*sic*] results from it, and Dr. Buffington will bear me out in his special field. Now the pendulum is swinging the other way. In the last July issue of the American Review of Tuberculosis Dr. Allen Krause says that the use of tuberculin is the only procedure which can settle a diagnosis of tuberculosis[5] [p. 378].

Dr. Durel died suddenly while administering pneumothorax to one of his patients, having rushed over from the polyclinic (where he was lecturing to the students) to perform this duty since he was afraid the younger members of the hospital staff were too inexperienced.

SUMMARY AND CONCLUSIONS

One may say that the history of tuberculosis therapy in the Lower Mississippi Valley follows the same general trends that were evident in

the rest of the world. As a rule the physicians in this section were fairly well informed as to the latest advances in the field of tuberculosis control. The art of diagnosis seems to have been much further advanced than that of therapy, which made very little progress until the introduction of the sanatorium.

As to the comparative incidence of tuberculosis in various sections of the United States, very little information could be assembled of any scientific value. The statistics compiled were largely influenced by local feeling. Many of the statements or arguments as to the incidence of tuberculosis in the North or South were interesting, although very little could be proven from them.

As a whole, this study exhibits some interesting trends in tuberculosis control in a section of the United States removed from the centers where the greatest advances were made in controlling this malady.

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An Oversight in Nursing History

GENEVIEVE ANDERSON*

SCATTERED through the pages of a few nineteenth century English medical journals lies the fragmentary story of the struggle of a group of distinguished epidemiologists who labored arduously and apparently with little recognition to extend the field of nursing. What remnants remain of the history of this group's activities indicate that these epidemiologists envisioned the establishment of a nation-wide system of something closely akin to today's public health nursing.

Either forgotten or overlooked in the recording of nursing history, the tale of the efforts of this group to enlarge the scope of nursing to include home care of the sick throughout England lies buried in journals now obscure. In an abundance of nursing literature that traces the development of the art of nursing from the time of early Christianity until today, one finds detailed accounts of the attempts of lay and religious groups to establish systems for caring for the sick. But strangely enough, no credit is given the determined endeavors of a professional group so closely allied to the field of nursing, and particularly to that of public health nursing.[1]

The story begins in the account of the transactions of the London Epidemiological Society for the year 1854. In the report of that Society's Council dated April, 1855 an announcement is found of a committee having been formed within the Society in May of the previous year which, in the words of the committee's secretaries, was established "for the purpose of determining the feasibility of a plan to secure throughout the country a staff of nurses available for the labouring population, when attacked by epidemic disorders, such as fever, cholera, or the like, when at any time overtaken by sickness or during the period of childbirth."[2]

This Epidemiological Society had been founded in 1850 by a group of physicians concerned over the high mortality from "zymotic diseases." It had established as its first objective that of instituting a "rigid exami-

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[1] Nutting, M. Adelaide, and Dock, Lavinia L. *A history of nursing*. New York, G. P. Putnam's Sons, 1907. Ch. VI, p. 292, contains a paragraph referring briefly to Louisa Twining's disapproval of the proposed plan.

[2] Committee for Supplying the Labouring Classes with Nurses in Time of Epidemic and Other Sickness. *Trans. epidem. Soc., London*, 1855, *1*, 10.

nation into the causes and conditions which influence the origin, propagation, mitigation, and prevention of epidemic diseases."[3] In view of this avowed purpose of the Society it seems highly significant and complimentary to the profession of nursing that the seventh committee formed within the Society, one which was labeled in the minutes of the Society as a "most important" committee,[4] should concern itself with the problem of enlarging the scope of nursing.

The formation of the Society's committee to secure visiting nurses was the outcome of an address delivered before the Epidemiological Society on April 3d of 1854[5] by one of its founders,[6] Dr. Edward H. Sieveking (later Sir Edward Sieveking),[7] who became an eminent figure in British medicine during the latter half of the nineteenth century and served as Physician Extraordinary to two occupants of the throne of England.[8] Dr. Sieveking's address to the Society was a proposal that suitable inmates of England's workhouses be trained in nursing so that they could go outside the workhouse and do nursing among the poor.[9]

A study of this physician's background offers an insight into his plan, which at that time must have been regarded as somewhat visionary.[10] Accounts of his activities reveal him to have been a man of widespread scientific and philanthropic interests. Early in his medical career he had evinced a genuine solicitude for the problems of humanity which others concerned only with disease per se might have considered to be outside the scope of medicine. While practising in Germany, after having completed his medical studies on the Continent, he had, with his aunt, Amalia Sieveking, a well-remembered figure in nursing history, founded a hospital for children in Hamburg. After his return to England he had worked as a dispensary physician in one of the large metropolitan hospitals of the day, and during his visits to the sick poor at their own homes he had become deeply impressed with the vicious cycle set up by illness in homes of the indigent—the disruptive effect on the entire

[3] *Trans. epidem. Soc., London,* 1855, *1,* 2.

[4] *Ibid.,* p. 3.

[5] Sieveking, E. H. A proposition to supply the labouring classes with nurses in the time of epidemic and other sicknesses. *Trans. epidem. Soc., London,* 1855, *2,* 1-10.

[6] *Epidemiological Society, London.* Commemoration Volume, 1902, p. 5.

[7] Sir Edward Sieveking (Obituary). *Brit. med. J.,* March 5, 1904, *1,* 581-582.

[8] Powell, R. D. Sir Edward Sieveking. *Med.-chir. Trans.,* 1905, *88,* cviii-cix.

[9] These inmates were paupers unable to subsist independently outside the workhouse. They were not, as our present-day connotation of workhouse suggests, persons guilty of petty offenses, but rather were comparable to the inmates of our poorhouses.

[10] See *Trans. epidem. Soc., London,* 1855, *2,* 2; obituaries of Sir Edward Sieveking in *Brit. med. J.* (Note 7); *J. Balneol. Climat.,* Oct. 1904, *8,* 261-264; *Lancet,* March 5, 1904, *1,* 680-683; *St. Mary's Hosp. Gaz.,* March 1904, *10,* 44.

family when one of its members became ill and the consequent degenerative effect of this upon the illness. Concern for this social problem had led him to publish in 1849 his pamphlet advocating the training of workhouse inmates to do nursing among the poor. After five years of studying the plan's potentialities he presented it to the Epidemiological Society in 1854.[11]

In submitting his plan to the London Epidemiological Society, Dr. Sieveking argued logically from two premises.[12] First, to encourage the support of the political economist he pointed out that illness improperly cared for in the poor, particularly where the illness attacked the breadwinner, resulted in the family's being thrown on society for relief, thus increasing the already exorbitant poor rates.[13] Through reducing the amount of disease in the poor, he foresaw direct reduction in the amount of crime and poverty and therefore a gain to all of society. Secondly, he maintained that no plan so comprehensive in scope as that which he contemplated—provision of nurses for the poor throughout Britain—could practically be undertaken by a private charity. The lack of religious uniformity in England, he felt, precluded the possibility of successfully founding a nation-wide system of nursing the poor dependent upon the support of groups with different religious convictions.

Dr. Sieveking also pointed up additional benefits that might well derive from such a system. He argued that the saving to families through establishment of this plan would permit them either to remunerate the nurse or to pay a small sum to the poor law union[14] which could be turned back to the nurse in the form of a bonus. Not only would the bonus stimulate the morale of the nurse who received it, but also it might eventually make her independent, thus further reducing the cost of pauperism to society. In addition, it might encourage respectable women outside the workhouse to enter nursing and thus increase the number of nurses available to all classes of society.

Anticipating the opposition of certain of the medical profession, Dr. Sieveking emphasized that the plan was not intended to substitute "female doctors" for the medical man, but rather the nurses were to supplement the doctor's work under his careful direction. To meet the problem of securing adequate personnel to train and supervise the workhouse inmates

[11] Sieveking, E. H. *The training institutions for nurses and the workhouses. An attempt to solve one of the social problems of the day.* London, Williams & Norgate, 1849. 22 pp.

[12] *Trans. epidem. Soc., London.* 1855, *2*, 1-10.

[13] Taxes.

[14] For purposes of local poor law administration England was divided into poor law unions.

he suggested the appointing in each workhouse of a superintending nurse or matron who would be advised by the guardians of the workhouse, the clergy, the medical men, and the ladies' visiting societies. He expected a certain amount of prejudice in the beginning on the part of the communities into which the pauper nurses were to be sent but thought this would be overcome by the favorable influence on public opinion of the doctors' acceptance of the pauper nurses.

Many similarities between Dr. Sieveking's proposal and present public health nursing practice appear. The importance of close medical direction and the advantage of advisory assistance from lay groups are found in both. Of the differences, two are outstanding. First, as Dr. Sieveking's plan was constituted, on occasions where it seemed desirable, the nurse would remain in a home overnight instead of returning to the workhouse. Therefore he felt this made it essential that the nurse be one of the poor class she visited in order that she might function more satisfactorily as an integral part of the family unit. Second, Dr. Sieveking's concept of the rôle of the nurse in the home held that, in addition to superintending the care of the sick, she would be expected to assist with household tasks whenever her services were needed, and to see that the domestic routine ran smoothly despite illness.

The members of the Epidemiological Society who heard Dr. Sieveking's proposal in April of 1854, among whom was Dr. John Snow of fame in the study of cholera, were almost unanimous in agreeing that it warranted the support of the Society.[15] As a result, out of the meeting came the committee that was charged with securing action on the plan. The value that this Society placed upon the rôle of the nurse in prevention of disease is brought out in a resolution that the committee adopted. "The committee are strongly of opinion," this resolution states, "that if it were possible to provide a staff of nurses easily available throughout the country, and at given points, a material benefit would accrue, perceptible not only by the shorter duration of disease, and the consequent diminution of mortality and pauperism among the labouring classes, but also by the more complete and more speedy arrest of contagious disorders which spread to all classes, and by the diminution of poor- and country-rates, which are, in a great measure, levied to provide against the direct or indirect effects of suffering preventible by

[15] Epidemiological Society [report of meeting]. *Lancet,* April 8, 1854, *I,* 391-392.

the assistance contemplated. The committee hold that the sanitary measures which mark the progress of modern civilization are of vital importance; but they are also of the opinion, that under the most efficient sanitary system, there will yet always remain a large amount of sickness claiming the aid of the medical attendant and the nurse."[16]

Although this committee left behind it little of an official record of its activities, particularly in the journal of its own Society, what records it did leave, supplemented by references to its work in other periodicals, permit a sketch of the progress of its labors. We find that as soon as the appointment of the committee was announced, medical journals of the day hailed the project as an important step forward in the health of England.[17] For financial support of the undertaking the committee appealed through some of these journals to the public.

Immediately following the April, 1854 meeting of the Epidemiological Society at which the project was initiated, the appointed committee forwarded a statement relating its objectives and plans to the English Poor Law Board in charge of administration of the workhouses. Shortly thereafter, in June, the committee members called upon the President of the Poor Law Board, who rejected the plan as being impossible of achievement unless Parliament were to confer further powers upon the Board.[18] For some time apparently the proposal remained a dead issue with the Poor Law Board, and in March of 1855, in a communication to the committee that seemed intended as a final rebuff, the Board objected that the character of workhouse inmates was in most cases of so dubious a nature that few suitable candidates for nursing would be found.[19]

Accounts of poor law history in England reveal the fact that treatment of the sick, even within workhouses, seemed to be of little concern to the Poor Law Board. Writing of poor law administration during this era, the Webbs refer to the "deep sleep" in which the Poor Law Board was engulfed throughout these years, despite the fact that attention was repeatedly called to existing intolerable conditions.[20] With this lack of concern within the workhouses it seems apparent that the

[16] *Trans. epidem. Soc., London*, 1855, *1*, 10-14.

[17] Nurses for the poor. *Brit. foreign med.-chir. Rev.*, July 1854, *14*, 282. See also *J. public Health sanit. Rev.*, 1855-1856, *1-2*, 3-5 (section containing Transactions of Epidemiological Society); also Note 15.

[18] See Note 2, p. 14.

[19] Ogle, J. W. Nurses for the sick poor. *Med. Times Gaz.*, April 11, 1874, *1*, 395.

[20] Webb, Beatrice and Sidney. *English poor law history: Part II, The last hundred years.* London, Longmans, Green and Co., 1929. Vol. I, Ch. IV.

committee of the Epidemiological Society had a considerable task to perform in attempting to arouse the Poor Law Board from its lethargy.

Undaunted, however, by these initial snubs, the Society's committee had in the summer of 1854 gone ahead with its plans and had sent out questionnaires to the medical officers of every union in the Kingdom and to the workhouse masters.[21] In these questionnaires the committee asked for opinions as to the feasibility of the plan for all communities and for suggestions regarding the plan's operation. Although the committee had anticipated its greatest opposition from the workhouse masters, replies to these queries indicated overwhelmingly a favorable attitude toward the plan. On the strength of this, then, it attempted to enlist further support—that of a medical relief committee of the House of Commons and the General Board of Health.[22] Unfortunately, the medical relief committee ceased functioning just at this juncture, and, while the President of the Board of Health requested a report on the project that he might include in his report to Parliament, no tangible results followed this move.

About this time it was proposed that the committee of the Epidemiological Society be amalgamated with a society for the training of nurses. However, since this latter society's purposes were limited to supplying nurses for the Crimean War then in progress, this plan was rejected.[23]

Still lacking the necessary coöperation of the Poor Law Board, the committee, in November, 1855 enlisted the support of the 7th Earl of Shaftesbury.[24] By this time the committee had grown to large proportions and included five masters of metropolitan workhouses in addition to members of the clerical profession and of the medical profession outside the Epidemiological Society. Since the interests of Lord Shaftesbury leaned strongly in the direction of social reform, the plan of the Epidemiological Society immediately proved acceptable to him, and as a result in April of 1856 he headed a deputation of the committee to the Poor Law Board.[25] Adding further prestige, Lord Stanley also accompanied the group. Certain details relative to the working out of the plan had

[21] Nurses for the labouring classes. *Lancet,* Oct. 28, 1854, *2,* 365-366; Epidemiological Society's nurses for the poor. *Lancet,* Jan. 6, 1855, *1,* 21; see also Note 19.

[22] See Note 2, p. 14; also *Lancet,* Oct. 14, 1854, *2,* 322.

[23] See Note 19.

[24] *Ibid.*

[25] *Ibid.;* The nursing scheme of the Epidemiological Society and the Poor Law Board. *Brit. foreign med.-chir. Rev.,* July 1856, *18,* 277-279; Nurses in workhouses (Letter to Editor). *Lancet,* June 7, 1856, *1,* 639-640.

by now been modified to overcome objections of the Poor Law Board, and with this influential pressure brought to bear upon it the Poor Law Board immediately recommended the project to the poor law inspectors throughout England.

Apparently a lack of any specific action within the workhouses next stimulated the committee to create a subcommittee for the purpose of having it work directly with the guardians of a particular parish in order to demonstrate on a small scale the potentialities of the plan.[26] Although complete details were worked out for the training of pauper women, even this attempt failed to produce the necessary coöperation. Shortly thereafter the committee of the Epidemiological Society ceased formal activity.

Not long after the committee's demise, a physician writing anonymously published a pamphlet on this necessity of securing nurses for work among the labouring classes, and it is interesting to note the broad concept he held of the nurse's activities. His publication was entitled "On Employment of Trained Nurses Among Labouring Classes Considered Chiefly in Relation to Sanitary Reform and the Arts of Life." In describing the qualifications anticipated of these nurses he wrote: "The kind of person contemplated is to be not only an attendant upon the sick, but the friend and adviser of the poor in all that concerns their daily life and temporal welfare. She should therefore be well informed in all matters that conduce to make the life of the working man a more successful affair than he makes of it at present. She ought, for instance, to be able to give information concerning the rules and regulations of provident and friendly societies, of all kinds of clubs, questions concerning the pawnbrokers' shops, lending libraries and cheap periodicals of a wholesome tendency. It would also be very desirable if she had some knowledge of law, as far as it concerns the poor, such as the law of settlement and removal, marriage and judicial separation, the recovery of debts, and other similar questions."[27]

A critical review of this pamphlet in one of the leading medical journals of the day suggests that perhaps this broad field of activity for the nurse was as yet too visionary for the general practitioner. The critic wrote: "We believe in the gradual progress of the country and in the march of intellect, but however sanguine we may be, we cannot yet see

[26] See Note 19.

[27] Review of pamphlet. *Brit. foreign med-chir. Rev.*, Oct. 1860, *26*, 467-468.

signs of the advent of a time when so much may be expected of a nurse. In the meantime let us be satisfied if we can but obtain nurses who understand what is really their business."[28]

Although the report of the last secretary of the Epidemiological Society's committee, written in retrospect in 1874,[29] recalls only that the dulling of interest in the committee's work was due to a variety of circumstances, several explanations for the failure of the project seem apparent. Outstanding among the obstacles hindering the progress of the project was the deplorable state of poor law medical relief at the time. To have superimposed a successful plan for caring of the sick in their homes upon such a shaky structure would appear to have demanded Herculean effort. Further, the fact that the recommendation given by the Poor Law Board relative to making the plan operable was of a permissive rather than mandatory nature must also have been part of the crux of the situation.[30] The history of poor law indicates that the strong iron hand was needed in order to move many of the boards of guardians to any activity that could not categorically be defined as a function of doling out relief. In addition, throughout the nineteenth century, the Poor Law Board indicated an unwillingness to recognize the need for provision of nurses outside the workhouses. According to the Webbs, when circumstances finally forced it to issue an order in 1892 to provide nurses for the sick poor in their homes, the order was accompanied by a vitiating statement to the effect that only in unusual circumstances would it seem desirable that a sick pauper be cared for at home.[31]

Another factor in the failure of the plan may have been a lack of sufficient able-bodied inmates of workhouses to carry the plan into operation. This was one of the earliest objections. However, Dr. Sieveking, in formulating the plan, had consulted the Fourth Annual Report of the Poor Law Board for 1851, and this revealed a total of some 21,000 able-bodied persons available.[32] Further, the masters of the workhouses and the medical officers of the various unions were closest to the situation and had wholeheartedly endorsed the plan.[33] This objection, therefore, hardly squares with the facts.

There is a partial reason for failure of the plan given in the later letters of Dr. Sieveking when, in recalling the work of the committee,

[28] *Ibid.*
[29] See Note 19.
[30] See Note 25, Nurses in workhouses.
[31] See Note 20, p. 337.
[32] See Note 5, p. 7.
[33] See Note 19.

he explained that the powers of the boards of guardians were not adequate to the situation. He suggested too that the magnitude of the plan, together with the difficulties involved, proved too much for the group from the Epidemiological Society, all of whom were overburdened already by their medical practices. Apparently realizing that so mammoth a project required and deserved the support of all community groups, in later years he scored society in general for not recognizing the need for a national nursing program and attempting to meet it.[34]

Finally, in defense of the poor law administration of the time, there is the possibility that the character of the inmates of workhouses was, as the Board had intimated, such that the inmates could not be entrusted with responsibility for nursing the sick, particularly where they were freed from direct supervision.[35] In the diary of one of the social reformers of the day, Louisa Twining, reference is made to Dr. Sieveking's plan, and Miss Twining attributes its failure to the lack of suitable and respectable women to be found in workhouses.[36] Miss Twining regarded the plan of the Epidemiological Society as being revolutionary and on several occasions publicly objected to the proposal.[37] Since one of Miss Twining's projects was that of securing the admission of ladies belonging to visiting societies into the workhouses in order to secure reform in the care of the sick within workhouses, this might explain her opposition to enlarging the scope of the activities of the inmates. Reformers of the day had little faith in the character of women in workhouses and objected to their being remunerated for their services on the grounds that any compensation received would immediately be invested in whiskey. The London epidemiologists, on the other hand, appear to have held considerable trust in the characters of the pauper women and anticipated that granting them an opportunity to become financially independent would redeem their self-respect and encourage them to give good care. Thus the project would serve to rehabilitate the paupers and return them to society as useful members. To strengthen its point, the committee had shown in a return authorized in the House of Commons in 1854, that of some 24,000 able-bodied women in workhouses that year there were nearly 23,000 "of good

[34] Sieveking, E. H. Letter to Editor. *The Times, London,* Nov. 2, 1868, p. 11; Nurses for sick poor. *Lancet,* Nov. 7, 1868, *2,* 615-616; Sieveking, E. H. An address on nursing of the sick. *Brit. med. J.,* July 1876, *1,* 183-184.

[35] Pauper nurses in workhouses. *Brit. med. J.,* May 1865, *1,* 551.

[36] Twining, Louisa. *Workhouses and pauperism.* London, Methuen & Co., 1898, pp. 37-38, 71.

[37] See letters to editor, *The Guardian:* Nov. 11, 1857, No. 623, 855; Oct. 13, 1858, No. 671, 804; Oct. 20, 1858, No. 672, 820; Oct. 27, 1858, No. 673, 851.

character."[38] Interestingly enough, this figure was not an estimate in round numbers as given above; rather, the report placed the number dogmatically at 22,872 women of good character. Apparently those who took the census as to who was of good character and who was not had unshaken faith in their judgment in such matters. There was no middle road.

Whatever the true reasons may have been for the lack of achievement of this earnest committee, its efforts warrant recognition. Historically, it should be of significance that the potentialities of good nursing care in the home were thought so important by a Society concerned with the prevention of spread of disease that the group labored throughout the 1850's to make nursing care in the home available.[39] The emphasis that the Epidemiological Society placed upon the preventive rôle these nurses could play suggests that the plan called for a close approximation to the work of today's public health nurse.

And not only did the Society's plan direct the thinking of medical men to the importance of good nursing care. It also enlisted the active interest of such prominent lay persons as Lords Shaftesbury and Stanley. It seems entirely within the realm of possibility that William Rathbone of Liverpool, credited with developing the first organized system of district nursing in 1859 (five years after the origin of the Epidemiological Society's committee and ten years after the publication of Dr. Sieveking's nursing plan), was influenced, at least to some extent, by these earlier efforts.[40]

[38] See Note 19.

[39] In the *Lancet* (May 28, 1904, *1*, 1523) there is an item stating that "Mr. A. Forbes Sieveking, son of the late Sir Edward Sieveking, is requesting the loan of any of his father's letters to assist him in writing an extended biography of this distinguished physician." There is no record of such a volume having been published.

[40] Rathbone, William. *Sketch of the history and progress of district nursing.* London, Macmillan and Co., 1890.

Benjamin Rush and the Beginning of John and Mary's College† Over Susquehanna

L. H. BUTTERFIELD*

Civilizing the Scotch-Irish Frontier

AMONG those who signed the Declaration of Independence in August 1776, none was more conscious of the full meaning of his action than a newly-elected delegate from Pennsylvania, Dr. Benjamin Rush. He was to spend much of his uncommon energy during the rest of his life in attempts to apply the principles of the Declaration, as he understood them, not merely in government but in medicine, science, letters, social reform, and education. The founding of Dickinson College on the Pennsylvania frontier across the Susquehanna was a part of his program of cultural revolution. In an essay on "The Mode of Education Proper in a Republic," composed soon after the college charter was granted in the fall of 1783, Rush declared that "the business of education has acquired a new complexion by the independence of our country. The form of government we have assumed, has created a new class of duties to every American."[1] The duties were, of course, those of responsible citizenship; and it was Rush's conviction, induced by the peculiar ethnic and political circumstances of the state, that Carlisle was a strategic place in which to begin his experiment in republican education.

Carlisle, a prosperous Scotch-Irish village founded about mid-century, was the focal point of a large area of semi-frontier settlements along and beyond the Susquehanna River. The region was passing from the second to the third stage of frontier development as described by Rush in his

Editor's note: This article was read at Dickinson College in March 1947 as the first of the Boyd Lee Spahr Lectures on the History of Dickinson College. In somewhat different form it will appear as a chapter in a biographical study of Rush now in preparation and to be published in The Life of Science Library. The texts of manuscript sources have here been in some degree modernized for the sake of clarity. Mr. Butterfield wishes to acknowledge gratefully the aid of a grant by The American Philosophical Society for locating and editing Rush's letters. He would gladly receive information about privately owned Rush letters and other manuscripts, including letters written to him.

† Rush's original name for Dickinson College.

* Princeton University.

[1] *Essays,* Philadelphia, 1798, p. 6.

lively "Account of the Progress of Population, Agriculture, Manners, and Government in Pennsylvania."[2] The second species of settler, says Rush, succeeding the woodsman who moves on when game grows thin, generally acquires three or four hundred acres, clears a part of it for meadow land, improves the rude cabin he finds upon the ground, builds a barn for his stock, plants an orchard, and raises crops of wheat and rye. His farm rarely looks prosperous or tidy. His fences are half made; his cattle are ill-fed, and if his windows were once glazed, their ruins are soon supplied with old hats or pillows. In Rush's view these deficiencies are not due solely to hardship:

> This species of settler is seldom a good member of civil or religious society: with a large portion of a hereditary mechanical kind of religion, he neglects to contribute sufficiently towards building a church, or maintaining a regular administration of the ordinances of the gospel: he is equally indisposed to support civil government: with high ideas of liberty, he refuses to bear his proportion of the debt contracted by its establishment in our country: he delights chiefly in company—sometimes drinks spirituous liquors to excess—will spend a day or two in every week, in attending political meetings; and, thus, he contracts debts which (if he cannot discharge in a depreciated paper currency) compel him to sell his plantation, generally in the course of a few years, to the *third* and last species of settler.[3]

The last is of course the permanent settler, who need not be described here beyond saying that he is "commonly a man of property and good character" and builds himself a stone house and barn. Rush was primarily interested in the second class, which embraced most of the Scotch-Irish settlers in the western counties. He had reasons for being so. On his trip to Carlisle for a meeting of the board of trustees in April 1784, he had closely observed them. After his return he wrote the Reverend William Linn of Big Spring, Cumberland County, a member of the board, that the local clergy ought more frequently and strongly to admonish their flocks on such subjects as fence-mending and whiskey-drinking. If this were done, Rush surmised, fewer farms would be sold to the more industrious Germans, and fewer Presbyterian families would move on to Kentucky or the Ohio.[4] To this suggestion Linn replied with the voice of experience:

> The people here have been drinking with all their might whiskey and bad rum all harvest. Though the physician says it will destroy their bodies, and the clergyman

[2] Written in 1785; first printed in *The Columbian Magazine*, 1786, *I*, 117-122.

[3] *Essays*, 1798, pp. 216-217.

[4] 4 May 1784. Library Company of Philadelphia, Ridgway Branch, Rush MSS (hereafter cited as Rush MSS).

it will ruin their souls, they drink on. They *will* have the *Constitution* and the *bottle* at any hazard whatever.[5]

By "the Constitution" Linn meant the Pennsylvania Constitution of 1776, regarded by Rush and his associates as the major stumbling-block to progress in Pennsylvania. In a very real sense Dickinson College was founded as an agency of the anti-constitutionalist or "Republican" party. The explanation is complex—as Pennsylvania political struggles are apt to be—and only an outline of it can be given here.[6]

The Revolution in Pennsylvania was more truly and thoroughly a revolution than in perhaps any other infant state. The Constitution of 1776, born simultaneously with the Declaration of Independence, destroyed not only the power of the British crown but also that of an entrenched aristocracy which was composed principally of English Episcopalians and Quakers. The new democratic leadership was dominantly Scotch-Irish, supported by two classes that had been deliberately denied the franchise by the old Assembly—Philadelphia artisans, and settlers in the western counties. In the early revolutionary movement Dr. Rush was as ardent a rebel as any among this popular party; he had sat in the convention that framed the constitution in the summer of '76, and had been elected a delegate to Congress by that convention in July. After a few months' observation of the "leather-apron" government in action, however, his sentiments toward it altered. Like John Dickinson and other conservative friends, Rush feared too much democracy all at once; he lost his seat in Congress early in 1777 because of his open disapproval of the constitution; and a little later he lamented to Anthony Wayne that the radical party had "substituted a mob government to one of the happiest governments in the world." The signer John Morton, he added, "it is said died of grief at the prospect of the misery which he foresaw would be brought upon Pennsylvania by her present form of government."[7] He now threw himself impetuously into the fight to revise the constitution, or, as he more vigorously put it, to rescue Pennsylvania "from the hands of tyrants, fools, and traitors."[8] He wrote pamphlets and newspaper pieces, aided in organizing the Republican, or opposition, party, and resolved to

[5] 20 July 1784; Rush MSS.

[6] Two recent studies jointly provide a thorough and reliable account of Pennsylvania party battles during and after the Revolution: J. Paul Selsam, *The Pennsylvania constitution of 1776*, Philadelphia, 1936, and Robert L. Brunhouse, *The counter-revolution in Pennsylvania, 1776-1790*, Harrisburg, 1942.

[7] 19 May and 18 June 1777; Historical Society of Pennsylvania, Wayne Papers.

[8] To John Montgomery, 5 Nov. 1782; Rush MSS.

plant a college—as a general would plant an outpost—in the enemy's country.

This is, however, to skip several steps. Rush's opposition did not become violent and embittered until after the reconstruction of the College of Philadelphia in 1779. Under the guidance of its redoubtable Episcopalian provost, the Reverend William Smith, whose conduct in the Revolution was to say the least equivocal, the College of Philadelphia was —or was believed to be—a center of Tory reaction. By an act of 27 November 1779 the Legislature confirmed its charter but dismissed its trustees and faculty (the faculty being shortly invited to return to their duties), and established it as a state university with an income from confiscated loyalist estates.[9] Professor Cheyney has pointed out that the University of the State of Pennsylvania was a bold and valuable educational experiment;[10] but to Rush the act of reconstruction appeared in the light of cheap vengeance, repugnant in all respects but perhaps most in its requiring officers and teachers to swear an oath of loyalty to the revolutionary government of Pennsylvania. He therefore refused to resume his chair as professor of chemistry in the Medical School. His feelings are best expressed by himself, in a letter to Dr. Nisbet, the prospective president of Dickinson College, giving a history of parties in revolutionary Pennsylvania. This "history" is a wonderful combination of unassailable facts, shrewd observations, slander, half-truths, and rigged statistics; but it is characteristic of Rush when writing on controversial subjects, and, knowing him, we are prepared for it—as Nisbet, unfortunately, was not.

The letter[11] begins with an interesting exposition of the ethnic makeup of the state. The passive or moderate conduct of the Quakers and Episcopalians in 1776, Rush goes on, "threw our government wholly into the hands" of the several sects of Presbyterians, while the Germans,

> who are an uninformed body of the people, submitted to their usurpations and formed a principal part of their strength. Their [the Presbyterians'] first act of power was to impose a Constitution upon the State full of innovations and wholly contrary to the ancient habits of the people. This Constitution was formed by a fanatical schoolmaster[12] who had art enough to sanctify it with Dr. Franklin's name. It consists of a single legislature and a new-invented body of men called a council of censors and of many other new-fangled experiments, absurd in their nature and dangerous to the liberties of the state. By precluding 2/3 of the State

[9] Dallas, A. J. *Laws of the Commonwealth of Pennsylvania*, 1797, *1*, 815-821.

[10] *History of the University of Pennsylvania, 1740-1940*, Philadelphia, 1940, ch. iv.

[11] 27 Aug. 1784; Rush MSS.

[12] James Cannon is meant; he was professor of mathematics in the College of Philadelphia.

from voting by means of the most disgraceful test laws, they have contrived to support their constitution to the present day.

The Republican party, according to Rush's analysis, consists of the "Episcopalians, Quakers, Lutherans, Menonists, and moderate Presbyterians," that is, "in general the ancient inhabitants of the State, . . . distinguished for their wealth, virtue, learning, and liberality of manners." This party formerly controlled the College of Philadelphia.

It was founded by the Episcopalians and supported by them without the least aid from government for 22 years. This College with all its funds was seized in the year 1778, contrary to justice and policy and even contrary to their own Constitution, by the Constitutional party. Dr. Ewing, Geo. Byron, and Jos. Reed (then president of the State) took the lead in the most nefarious business. Dr. Ewing, as the reward of his activity in this fraudulent act, was honored with the provost's chair. £1500 a year was added to the ancient funds of the College by the Assembly. But Heaven has frowned upon the impious act. The College has fallen into general disrepute. Boys of 14 and 15 years of age not half educated are admitted to the honors of the College, and morals and manners are kept out of sight as much as they are at riding or fencing school in Great Britain.

Foreseeing that this act in robbing a college of its charter could not be lasting, and anxious to provide a seminary for better education of our youth, a few gentlemen of our society projected the College at Carlisle in the year 1781. It promised great advantage to the State in that western district. It bid fair to soften the tempers of our turbulent brethren, to inspire them with liberal sentiments in government and religion, to teach them moderation in their conduct to other sects, and to rescue them from the charges of bigotry and persecution that are so often brought against them. It was intended further to reform and civilize our German citizens, too many of whom imagine the whole business of life to consist in *labor,* and all its happiness *in gold and silver* and fine *plantations*. The friends of the College of Philadelphia saw this undertaking with fear and indignation. Dr. Ewing wished to hold the key of all the learning in the State in his hands. They all dreaded the effects of a good education upon their narrow schemes, for they knew 38 out of 40 of the trustees were opposed to them in politics and would inculcate principles contrary to their wild and interested ideas of policy and government. Every attempt was made to prevent our obtaining a charter, but to no purpose. The characters of some of the projectors of the College were calumniated by them even in the public newspapers. Their shafts fell heavily upon me, but none of them penetrated even the cuticle. One while I was the *projector*. Then I was the *tool* of the enterprise. One while I was a fool and a madman. Then I was a deep designing fellow. One while I was the enemy of Presbyterians. Then I was an enthusiast in promoting their interest to the awakening of the jealousies of other societies. It is but justice to Dr. Ewing to own that he was the most violent in circulating these calumnies.

Such, as Rush understood it and as he wanted it understood, was the political background of the movement to found a western college. Rush himself believed he had given Nisbet a faithful and impartial account.

"May I share in your friendship hereafter," he declared, "only in proportion as you shall find every word in this letter *strictly true.*" As some later episodes will show, Rush possessed that sometimes useful but very disconcerting faculty of self-hypnosis which enables a person to believe that he cannot possibly be wrong. He was like Matthew Arnold, of whom it is reported that, upon being asked if he wasn't just as dogmatic as John Ruskin, he replied, "Of course I'm dogmatic. The difference between us is that Ruskin is often wrong."

Among other convictions, Rush held that the Presbyterian leaders in the state—Bryan and Ewing in particular—were bad men, whose unscrupulous conduct in the seats of power would wreck the College of Philadelphia, the Presbyterian Church, and civil government itself in the commonwealth. The college at Carlisle, he patiently explained to John Bayard after the Republicans in 1784 had failed to bring about a convention to alter the constitution, "by banishing ignorance and promoting knowledge in government as well as religion," would serve as one means of preventing "the decay of our members and consequence in Pennsylvania."[13] Of Franklin College at Lancaster, which he helped to launch several years later, he had similar expectations. "From these two colleges," he told John Dickinson, "we hope will issue rays of knowledge which shall finally reform our constitution and laws, and humanize even the half-civilized inhabitants of the western counties of Pennsylvania."[14]

"THE DEAR PETULANT BRAT"

The task that Rush set for himself in planting a college beyond the Susquehanna was a tremendous one, beset with difficulties that would have overwhelmed a man of less resolution. He was virtually alone at the outset. Both friends and enemies clearly and insistently pointed out objections to his plan: there was no need for another college as yet in Pennsylvania; Carlisle was too remote; a single denominational basis was too narrow; adequate funds would not be forthcoming; an academy was what was needed, not a college. And so on. Rush was to find, from events, that all these objections were sound, though he never admitted them to be so. He staggered in the face of his difficulties—the tergiversation (as he believed) of friends, the assaults of enemies, the dearth of funds, his profound disappointment in the principal he had chosen—but he did

[13] 25 June 1784; Rush MSS.

[14] 5 April 1787; Historical Society of Pennsylvania, Logan Papers.

not sink under them. *"Give over our College!* God forbid!" he exclaimed to John Montgomery, who had written a disheartened letter from Carlisle early in the struggle:

> No, not if every trustee in the board (half a dozen excepted) perjured themselves by neglecting or deserting their trust. I am neither tired nor discouraged. The necessity and advantages of a college at Carlisle appear the same now to me as they did in the year 1781 when we first projected it. We *must* succeed—unless the trustees at Carlisle are determined to chase learning as the Gadarenes once did Jesus Christ from their borders. I consider your languor as the only enemy we have now to encounter.[15]

To Rush the college was as dear, and as troublesome, as a child; it is therefore not surprising that he frequently used the imagery of the filial-parental relationship in speaking of it. For thirty years he fought its battles, guarded its funds, sought teachers, money, books, and equipment for it, exhorted the trustees, and cheerfully carried the burden of ultimate responsibility for its life and welfare. It never occurred to him to despair, not even when the first college building, erected by great and sacrificial effort, burned down at the moment of its completion. He never faltered in his conviction of eventual success. Writing Montgomery on 3 July 1802, he said:

> Bingham's porch [an allusion to the spot where Rush and Montgomery had first discussed the plan for the College] may wear away, but the ideas conceived on it by two of the trustees will have their full accomplishment, and Dickinson College will one day be the source of light and knowledge to the western parts of the United States.[16]

This is, however, a story that has been well told before,[17] and it will not be repeated here. Two episodes that have not been told before pleasantly illustrate Rush's fond and vigilant care for his college.

The first concerns books for the Dickinson library. From the outset Rush importuned friends on both sides of the Atlantic for gifts of books. To John Coakley Lettsom, the Quaker physician in London, he wrote, for example, on 8 April 1785:

> Will you give me leave to solicit your friendship to our College in begging a few books from your friends for our library? The sweepings of their studies will be very acceptable in our illiterate wooden country. The lumber of the stalls in the streets

[15] 14 Jan. 1785; Rush MSS.

[16] Rush MSS.

[17] First by Harry G. Good in *Benjamin Rush and his services to American education*, Berne, Indiana, 1918, ch. iv; by Nathan G. Goodman in *Benjamin Rush, physician and citizen*, Philadelphia, 1934, ch. xv; and most fully by James Henry Morgan in the early chapters of *Dickinson College . . . , 1783-1933*, Carlisle, 1933.

of London, which are sold by weight, would make us truly rich. It will give me great pleasure to make our trustees (who are composed, with a few exceptions, of the first men in the State) acquainted with your name, and to assist in transmitting it to posterity, in a country where the fame of learning and benevolence will exist, after both have yielded in every part of Europe to the admiration of splendid buildings, or to a veneration for hounds and horses.[18]

Such an appeal was bound to be successful, but among the books Lettsom sent was a thirty-volume set of the *Journals* of the House of Commons. Having consulted James Wilson, Rush thought he could obtain from the Pennsylvania Assembly a guinea a volume for these, which would, he pointed out to Montgomery, "purchase four times the number of more useful and necessary books for a college."[19] Montgomery evidently thought this step a little questionable, even if Lettsom's name were inscribed in the books purchased, for in his next letter Rush exclaimed: "What—not exchange the Journals of the House of Commons for modern history or books on mathematics! Why, my friend, they will not be worth to us their carriage to Carlisle. We had better sell them to a pastry cook and get a neat edition cut in wood."[20] Rush did not like to be crossed. He had made up his mind that the *Journals* of the House of Commons were not fit reading for republican youths. In a report to the board of trustees at its April meeting, he said that he had bought an *Encyclopedia Britannica* and certain mathematical works and requested leave to sell the *Journals* in order to recover the sum expended. The *Journals* might "be useful in the State House library," he conceded, "but it would distress me to hear that a student of Dickinson College had ever wasted half an hour in examining even the title pages. He would find nothing in them but such things as a scholar and a gentleman should strive to forget."[21] This was Americanism with a vengeance. Rush usually had his way in these matters. But on this occasion his fellow trustees defied his wishes. The pernicious *Journals* are still in the Dickinson College Library.[22]

The second episode occurred during the bright dawn of Dickinson College in the spring of 1784. This was Rush's journey to Carlisle for the first meeting of the board of trustees on the site of action. Since it was also Rush's first trip this far west, he kept, according to his custom when

[18] Pettigrew, T. J., Ed. *Memoirs of the life and writings of the late John Coakley Lettsom, M.D.*, London, 1817, II, 427.

[19] 28 Dec. 1785; Rush MSS.

[20] 20 Feb. 1786; Rush MSS.

[21] [—— April] 1786; Huntington Library.

[22] This information is drawn from an interesting article published since the present paper was read: James W. Phillips, The sources of the original Dickinson College Library. *Pennsylvania History*, 1947, *14*, 108-117.

visiting new country, a little journal of observations, the manuscript of which has only recently come to light.[23] Covering the trip out and back, from April 2 to 12, the diary is matter-of-fact rather than literary or philosophical in tone, and records little not previously known concerning the history of the College. But Rush was an attentive observer of men and manners, and the extracts given here are a mere inadequate sampling of the sharp, significant details that summon up the life of post-revolutionary Pennsylvania.

Starting at ten in the morning, Rush traveled thirty-four miles the first day, having stopped to eat at two Quaker taverns on the way, and putting up at a third, Valentine's, for the night. One surmises he chose Quaker houses for political reasons: here he could listen to good anti-constitutional, anti-Presbyterian talk. Of one innkeeper, Quaker in his sentiments but not wholly in his manners, Rush says that,

> Upon my giving him an opening, he broke forth and cursed the minority,[24] the constitution, and the Presbyterians all in a breath.—"But I ask pardon, sir," said he. "I hope no offence. Perhaps, sir, you are a Presbyterian. I don't mean to be rude." "Say on, my friend," said I. "You can't offend me by anything you can say of any sect."

This was pleasant enough, and so was the first evening, spent alternately in reading, writing, and walking. An occasional inclination to take a pinch of snuff, Rush confesses, was restrained only "by recollecting how many pathetic, animated, and affectionate remonstrances I had received against it from my dear Mrs. Rush." The next day's travel brought him to Lancaster, where he found President Dickinson at the Sign of the Bear. That evening a half-dozen local political leaders and clergymen came in to pay their respects, and there was much agreeable talk on the evils of the constitution. On the fourth, Rush and Dickinson continued on to Middletown; on the fifth they followed the river, the banks of which were littered with fragments of houses destroyed by a recent freshet, to Chambers Ferry, where they crossed and rode on to Carlisle. Rush noted almost incredulously that his landlord had "assisted in cutting down the trees that built the first log house in Carlisle," now a town of three hundred houses. The trustees convened in the Episcopal Church in Carlisle on the sixth at noon. A sermon on the utility of seminaries of learning was

[23] It is owned by Josiah C. Trent, M.D., Durham, N. C., by whose kind permission it is quoted here.

[24] That is, of the Council of Censors, then in adjournment because the Republican majority had failed to obtain a large enough vote to summon a constitutional convention.

followed by dinner at John Montgomery's; at the Court House in the evening the trustees took the oaths required by law and engaged in a business session. Next day there was another session and a tour of the "public works"—the storehouse and barracks erected early in the Revolutionary War, which was under consideration for use as a college building. On the eighth, with the election of Charles Nisbet as principal and James Ross as professor of languages, the trustees' business was concluded, and they were entertained at an elegant dinner provided by the citizens of Carlisle.

The return trip was by way of York, where Rush had many friends to visit and spent two days. Among other errands, Rush commissioned a German artist named Fisher to cut the college seal after a design proposed by Rush himself and approved by the trustees at their recent meeting. (To grasp Rush's hopes for his infant seminary, one hardly needs to do more than to study the symbols on the seal he proposed. They were a liberty cap and telescope above an open Bible.) The rest of the trip, which took two days and a half, was pleasant if not eventful. After his leisurely ride through Lancaster County, Rush set down some observations to which he later often recurred:

> The country over which we rode this day was equal in point of cultivation to any perhaps in the world. Stone houses and barns—large orchards—watered meadows—extensive fields of grain separated from each other with high fences, many of which were of posts and rails, everywhere presented themselves to our view. The contrasts between these settlements and the Irish [i.e., Scotch-Irish] settlements in Cumberland and York Counties was very great. I have described the latter formerly. One thing I omitted, and that is, near many of the houses in the Irish settlements we saw *still houses*. The quantity of rye destroyed and of whisky drank in these places is immense, and its effects upon their industry, health, and morals are terrible. I was sorry to hear that the Germans in some places were beginning to be corrupted with it. This is a poor reward to them for communicating their industry and arts in farming to the Irish, which is the case in Donegal, where many of them are as good and clean farmers as the Germans, and where they have acquired wealth and influence. Mr. Whitaker, who keeps a brewery as well as a tavern, told me that *beer* is becoming every year more fashionable in the country, and that last year he sold 1000 barrels. Perhaps this excellent liquor may root out whiskey from our country.

The jaunt to Carlisle braced Rush in the peculiar self-satisfaction he always felt when engaged in improving his country and his kind. He never concealed this self-satisfaction; in fact he took pains not to. In a letter to a co-worker a few weeks later, he said:

I think with great pleasure of the zeal and uniformity discovered at our late meeting at Carlisle. Delightful task! to accompany the progress of population and government with the standards of science and religion! Happy county of Cumberland and highly favored village of Carlisle! your hills (once responsive only to the yells of savages and beasts of prey) shall ere long awaken our young philosophers from their slumbers to trace the planets in their courses![25]

DR. RUSH AND DR. NISBET: A TRAGI-COMEDY OF CHARACTER

The relationship between Rush and Charles Nisbet, the Scots doctor of divinity whom Rush persuaded to come and serve as first principal of Dickinson College, would make an entertaining comedy. But the comedy would contain the tragic elements of disillusionment, frustration, and hatred as well. Rush and Nisbet were both men of strong convictions, and they found, no doubt to their mutual surprise, that most of their respective convictions were incompatible. One of the reasons for the trustees' choice of Nisbet was his reputation for learning, which was, by all accounts, well deserved. In Scotland he was called a "walking dictionary." He is said to have been able to repeat whole books of Homer and Virgil by heart and to have memorized Cowper's *Task* in two readings. Ashbel Green declared that he "was skilled in Hebrew, including the Chaldee, Greek, Latin, French, Spanish, German, and probably Erse."[26] Disregarding the question arising in one's mind as to how useful such accomplishments would be on the American frontier, the point is that Nisbet's pedagogy, like his scholarship, was old-fashioned. Rush, on the other hand, was a militant modernist in his educational thinking. He held, with Franklin, that Greek and Latin were largely useless lumber, and once ventured the opinion that, for Americans, a knowledge of the Indian languages would be more useful and fitting. His utilitarian educational program is well summarized in a statement made in 1788:

While the business of education in Europe consists in lectures upon the ruins of Palmyra and the antiquities of Herculaneum, or in disputes about Hebrew points, Greek particles, or the accent and quantity of the Roman language, the youth of America will be employed in acquiring those branches of knowledge which increase the conveniences of life, lessen human misery, improve our country, promote population, exalt the human understanding, and establish domestic, social, and political happiness.[27]

How far this was from the conservative views of Nisbet, whom Rush

[25] To William Linn, 4 May 1784; Rush MSS.

[26] Miller, Samuel. *Memoir of the Rev. Charles Nisbet, D.D.*, New York, 1840, p. 308.

[27] Plan of a federal university, *Federal Gazette*, 29 Oct. 1788.

may have had specifically in mind when writing, is obvious. It is no wonder that the schoolmaster found few scholars who came up to his standards, and complained that "Learning is unknown and consequently not in request" in America.[28] And it is significant that Rush apparently never tried to institute any curricular reforms at Dickinson after Nisbet was established there.

Both men were Presbyterians, but they were far from agreement on theological issues. Some years after Nisbet's arrival, it is true, Rush gave public support to the Universalists then organizing in Philadelphia. Writing a friend in Scotland in the spring of 1797, Nisbet acidly remarked that "Dr. Rush was supposed to be a Socinian and an Universalist in October last, when I saw him, but it is possible that he may have changed his religion three or four times since that time."[29] A devout believer despite his various heterodoxies, Rush was completely tolerant toward the many denominations in eighteenth-century Pennsylvania. This Nisbet hardly was. He would have placed Rush in the first of the "two great parties" which, he said, divided America, "the Anythingarians, who hold all religions equally good, and the Nothingarians, who abhor all religions equally."[30] Nisbet deplored the lack of governmental support for religious societies; evidently he would have liked to see a state church, preferably Presbyterian, re-established in America—an idea abhorrent to Rush's Jeffersonian principles.

These and other points of conflict between the two men reflected profound differences in their temperaments. Rush was an unhumorous optimist, holding that, with sufficient effort, the world could be made over according to rational principles and the City of God could be established on earth. "The devil who is the present tenant of our world," he once declared, "will not quit his hold of it till he has done the premises all the mischief that lies in his power, but go he must sooner or later."[31] This is Calvinist language but decidedly not Calvinist thinking. Dr. Nisbet was too orthodox ever to suppose for a moment that the Devil could be exorcized; indeed he found him remarkably active in the United States, and especially so in the vicinity of Carlisle. Nisbet derived some consolation for this distressing fact by indulging his vein of sardonic wit, as, for example, when he wrote Judge Allison after the fire in 1803:

[28] To Charles Wallace, 19 Aug. 1791; *N. Y. publ. Libr. Bull.* 1897, *1*, 180.

[29] To the same, 18 May 1797; *N. Y. publ. Libr. Bull.*, 1897, *1*, 314.

[30] To the same, 31 Oct. 1797; *N. Y. publ. Libr. Bull.*, 1898, *2*, 286.

[31] To Mrs. Rush, 21 Aug. 1793; MS. owned by Josiah C. Trent, M.D., Durham, N. C.

"We had been bothered by our trustees to make our College conform to Princeton College. We have now attained a pretty near conformity to it, by having our new building burnt down to the ground."[32] Twice in his life Rush found that wit was a weapon he could not cope with—in his quarrel with Cobbett and in his dealings with Nisbet. Years after Nisbet's death Rush cited him in a lecture on manners to James Rush as an example not to follow. Among the qualities for pleasing listed by Sir William Temple, Rush wrote—namely, truth, good sense, good humor, and wit—, the last is "the least necessary to command durable attention," though it is often mistakenly placed first.

> It was the bane of Dr. Nesbitt's conversation and letters. He seemed to live only to make people laugh or angry. It was, I believe, from viewing the unfortunate propensity to ill-timed and indiscriminate wit in Dr. Nesbitt when a young man that Dr. Witherspoon said he would almost as soon whip a boy for wit as for lying."[33]

The worst of it was that Nisbet directed his shafts at those things which Rush had represented to him in the most favorable light and which Rush himself held most dear—for example, the College itself and American democratic institutions generally. In his letters of invitation to Nisbet, Rush had depicted Carlisle and the college in the most glowing terms. All was peace, harmony, and prosperity on the Pennsylvania frontier. Rising to one of those *O! altitudo's* that he employed with remarkable success in obtaining presidents for colleges, he pictured the new-born institution lifting its feeble hands to Nisbet in supplication:

> To *you,* to *you* alone (under God), it looks for support and nourishment. Your name is now in everybody's mouth. The Germans attempt to pronounce it in broken English. The natives of Ireland and the descendants of Irishmen have carried it to the western counties. The Juniata and Ohio rivers have borne it on their streams through every township of the state that lies beyond Carlisle. Our saints pray for you as the future apostle of the church in this part of the world. Our patriots long to thank you for defending the cause of America at a time when and in a place where she had few friends: and our statesmen wish to see our youth formed by you for the various duties they owe to the republic.[34]

When the new principal arrived in Carlisle and discovered the reality behind this idyllic stage setting, he fell into a sort of morose fury and gave vent to sentiments that permanently alienated his patron. Everything was wrong. The rivers may have lisped Nisbet's name, but the

[32] Quoted in George R. Crooks, *Dickinson College: The history of a hundred years* [Carlisle], 1883, p. 25.

[33] 22 Dec. 1809; Rush MSS.

[34] Undated letter, probably April 1784: Rush MSS.

climate gave him a fever and was unendurably hot; the little building where classes were held was hopelessly inadequate; the addition to it was a "hogpen"; the faculty was far too small; the college funds were non-existent; books were not to be had; Mrs. Nisbet found that meat could not be kept overnight without putrefying; and the roof leaked over the bedrooms! All this Nisbet wrote to Rush from what he chose to call the "Tomb of Dickinson's College," and to friends back home he wrote not only of these distresses but of the faithlessness of those who had invited him to assume the principalship and of the low estate of learning, religion, and virtue in America. Taken by surprise at first by these outbursts, Rush eventually replied to them only with silence, while to his British friends he explained that Nisbet's letters, from which extracts were appearing in the papers, "were written under a deranged state of mind, occasioned by a fever which fixed itself upon his brain."[35]

After two or three years a *modus vivendi* was worked out between the two men. In the 1790's Rush was absorbed in other struggles, and Nisbet, resigned to an exile's fate, lived on, as he phrased it, "like a pelican in the wilderness ... without friends or society."[36] His further observation of popular government only deepened his distrust of it. To his friend Wallace in Edinburgh he could write in 1790 that "The most of our people have as little patriotism as religion, and many concurred in the Revolution merely to avoid paying their debts. I am afraid this country has not sense to govern itself .... The public men here are a mean set of rogues generally."[37] As the course of the French Revolution unfolded, Nisbet's anti-democratic jeremiads became almost hysterical. The Jacobins here, he warned, were fast bringing the United States to ruin, as the French Jacobins had already brought France to ruin. At the end of 1800 his pupil Samuel Miller consulted him about an intellectual survey of the closing century that Miller proposed to write —an idea which grew into a remarkable book called *A Brief Retrospect of the Eighteenth Century*. Nisbet's reply, dated from Carlisle on 16 December, begins: "Your design of preaching the funeral sermon of the 18th century is pious and rational." Among its noteworthy inventions, he pointed out, had been air-balloons, the rights of man, the sovereignty of the people, and the guillotine, while in theology the century had advanced

[35] To Richard Price, 25 May 1786; *Mass. hist. Soc. Proc.*, 1903, *2nd ser. 17*, 344.

[36] To Charles Wallace, 19 Aug. 1791; *N. Y. publ. Libr. Bull.*, 1897, *1*, 183.

[37] 20 Sept.; *N. Y. publ. Libr. Bull.*, 1897, *1*, 119.

to "what seems the last stage of delirium, the indifference to *all* opinions in religion," as expounded by Mr. Jefferson in his *Notes on Virginia.* "By the way," he interjected, "I have just learned with sorrow that he has been chosen President of the United States, and Burr Vice-President. God grant us patience to endure their tyranny."[38]

Nisbet was not the man to confine his political opinions to private correspondence. He taught them in his classes. Chief Justice Taney, in his recollections of Dickinson College in the 1790's, relates that the young Jeffersonians among Nisbet's students—a majority, he believed—viewed these opinions as "monstrous heresies" and, despite regulations, did not take them down in their notes.[39] Naturally these doings came to the attention of Rush, who had been a steady supporter of Jeffersonian principles since 1790. Nisbet's "high-toned Federalist politics," he felt sure, would permanently injure Dickinson College. A college, he wrote Montgomery,

> should be of no party. Democratic money weighs as heavily in our treasury as the money of the Federalists. The western counties of the middle states, on which we depend chiefly for scholars, are in general Democrats. They should not be offended; on the contrary they should be allured to the College by the silence of our professors upon the subjects which do not belong to the essence of good government. Let Belzibub go on in making war upon *himself.* Let Democratic tyranny and wickedness punish the overgrown crimes of monarchical tyranny in Europe. Schoolboys should have nothing to do with their squabbles, any more than with the battles of the tigers and wolves of our wilderness. It is enough if they are taught to love and admire our present excellent constitution, and to believe with its destruction will perish the remains of all the liberty in the world.[40]

That this would never come true during Nisbet's tenure of office, Rush well knew. But he knew just as well that there was nothing he could do about it. The two protagonists in the early struggles of Dickinson history had fought each other to a standstill. Those of Rush's sons who attended college were enrolled at Nassau Hall.

This little drama of character ends on a less unhappy note. With the abatement of the yellow fever epidemics in Philadelphia, the return of Cobbett to England, and the establishment of Jefferson as president, Rush's life was more tranquil and his spirit less frequently stirred to wrath. During this "era of good feeling" his attitude toward even Dr. Nisbet softened. One of the reasons he offered against enlarging the plan of the building to be constructed after the fire was the arrearages in

[38] Miller (Note 26), pp. 268-269.
[39] Quoted in Morgan (Note 17), p. 113.
[40] 21 June 1799; Rush MSS.

Nisbet's salary. Salaries should be thought of, Rush pointed out, before the trustees got "swamped in mortar."[41] Early in the following year Nisbet died—his salary arrearages, incidentally, still unpaid. With complete sincerity and perhaps a degree of contrition, Rush wrote to the same old friend:

> He has carried out of our world an uncommon stock of knowledge. Few such men have lived and died in any country. I shall long, very long remember with pleasure his last visit to Philadelphia, at which time he dined with me in company with Dr. Dwight of New Haven and Dr. Cooper of our state. His conversation was unusually instructing and brilliant, and his anecdotes full of original humor and satire. I hope the trustees have done honor to his memory by a funeral sermon and by defraying the expense of his interment.[42]

"Who," Rush adds at once, as if he betrayed too much feeling, "is to be his successor?" But that is another—and a complex and interesting—story.

[41] To John Montgomery, 30 May 1803; Rush MSS.

[42] 9 Feb. 1804; Rush MSS.

Notes and Queries

Edited by RALPH H. MAJOR*

To Professor Max Neuburger, Greetings!

It is with great pleasure that we extend a hearty welcome to Professor Max Neuburger who has recently arrived in the United States to make his home. It is hardly necessary to state that Professor Neuburger began as a *Docent* in Medical History at the University of Vienna in 1897 and became Professor in 1904. Neuburger and Pagel's *Handbuch* appeared in three volumes in 1902-1905, and his later *Geschichte der Medizin* in two volumes in 1906-1911. In our medical libraries these well-known volumes show how well they have served several generations of students during this half century. Throughout this long period new volumes followed in constant succession until the great catastrophe of World War II forced the Professor to leave his beloved Vienna and to find refuge in London. There he spent several years and was fortunately able to continue his historical studies.

Professor Neuburger is recognized as one of the great masters in the study of the history of medicine who have gathered source materials, laid out plans for its study and teaching, made it an integral part of education in our foremost medical schools, and who have likewise infused their disciples with a spirit of devotion. His own volumes are standard works of reference with which every student is familiar. Few of our masters have served so long a period, few have had the satisfaction of such unbroken and productive activity.

Recently it was possible for Professor Neuburger to rejoin his son, also a physician, who had preceded him to this country and who served as a surgeon in the United States Army during the recent war. This story, which has been told so quickly, must have been a long and anxious experience for Professor Neuburger and its happy termination now is a great relief to his friends. All of us welcome him to his new home with gladness and with reverence. We trust that he will long retain his health and vigor and that he will be able to visit some of our cities and enable his former students, his friends, and many more who have benefited from his works and who look upon him as an old friend to meet him and to express the heartiness with which they welcome him here.

HARRY FRIEDENWALD

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QUERY No. 13. Can anyone supply the pronunciation of "Religio Medici" used by Sir William Osler?

The question was raised by Thomas F. Gardner in *American Notes and Queries* (Vol. 7, p. 121, Nov. 1947) and has so far remained unanswered.

ELLEN KERNEY

Addendum

To footnote 1 of the article, "Etiological Thought in America Prior to the Civil War," *J. Hist. Med.*, 1947, *2*, 489, please add: For a brief introduction to the field of this article, the reader is referred to the work of Erwin H. Ackerknecht, "Malaria in the Upper Mississippi Valley 1760-1900," *Suppl. Bull. Hist. Med.* No. 4, 1945, 11-15.

PHYLLIS ALLEN

The Scottish Society of the History of Medicine

The company which met in the Hall of the Royal College of Surgeons of Edinburgh on 23 April 1948 to inaugurate a Scottish Society of the History of Medicine was large and representative, and the Society commenced its career under the most favourable auspices. The need for such a society had long been felt, as the only other organisation of this nature in Britain is the Section of History of Medicine, Royal Society of Medicine, London. It is therefore hoped that the new Society will provide a meeting-ground for all who are interested in the subject in Scotland and the north of England. Meetings will be held not only in Edinburgh but in other centres, and it is already proposed to hold the October meeting in Glasgow. A Constitution was adopted, and the following office-bearers were appointed: President, Dr. Douglas Guthrie; Vice-presidents, Mr. W. J. Stuart, Professor Fleming (Glasgow); Hon. Secretary, Dr. H. P. Tait, 137 Colinton Rd., Edinburgh; Hon. Treasurer, Dr. W. A. Alexander; Members of Council, Sir Henry Wade, Dr. W. D. D. Small, Brig.-Gen. Sutton, Professor Campbell (Aberdeen), Dr. John Ritchie, Dr. Henry Gibson (Dundee), Dr. Wilkie Millar, Professor Charles McNeil, Mr. A. L. Goodall (Glasgow).

The public business of the first meeting consisted of an address by Dr. H. J. C. Gibson on "The early days of Dundee Royal Infirmary," of which institution he is the Medical Superintendent. The Infirmary originated as a Dispensary, founded in 1735, and was re-organised in 1782 by Rev. Dr. Small, the Minister of the Parish, who was aided in this philanthropic effort by Mr. Stewart, Surgeon, and Sir Alexander Douglas, Bart., Physician—the members of the medical staff in 1798 when the first patient was admitted. The building was erected at a cost of £1400, a sum raised entirely by voluntary effort. In order to stimulate interest in the venture, as well as to meet a local shortage of copper coins, a "Dundee half-penny" was issued in 1796 while the hospital

was under construction. This coin shows on one side the original plan of the edifice and on the other, a frigate at anchor, with the town of Dundee in the background. To the newly-built hospital came the sick and hurt "whose home conditions were deficient in the accommodation their distresses needed." The patients were admitted at eleven o'clock each Thursday, unless they had travelled from a distance or required immediate attention, in which event they were admitted at any time. The decision regarding eligibility for admission was made by the Weekly Board of Management, and a maintenance charge of 3/6 per week was payable by the Governor who had recommended the patient. The nursing was of primitive order, and there was little distinction between nurses and servants; nevertheless the nurses showed great devotion to duty during times of stress or epidemic.

Dr. Gibson traced the story of the hospital from those early times to the building of the new Infirmary in 1855, at which date the chief advisers to the Board were Professor James Syme and Sir Robert Christison, respectively the leaders of surgery and of medicine in Scotland. Thus the Infirmary became, as it still remains, one of the principal voluntary hospitals of Scotland, serving the needs of patients from Angus, East Fife, and Perthshire.

At the close of the address, Dr. Douglas Guthrie announced that at the next meeting, in June, Dr. John Ritchie would deliver an address on "Quarantine for plague in Scotland in the 16th and 17th centuries."

Book Reviews

JAMES B. CONANT. *On Understanding Science; An Historical Approach.* New Haven, Yale University Press, 1947. xv + 145 pp., illustrated. $2.00.

IN THIS compact and provocative essay in pedagogy, President Conant proposes a college course in "The Tactics and Strategy of Science," to be taught by the case method.

In the second and third chapters he unfolds three case histories for which adequate source materials are available in English originals or translations: (1) the early history of pneumatics from Galileo through Torricelli, Pascal, and von Guericke to Boyle's work on "the spring of the air"; (2) the work of Galvani and Volta on electricity; (3) that of Priestley and Lavoisier on combustion.[1] There are frequent references to other case histories which might be included in the course. In the fourth and last chapter, the twenty-one principles of the tactics and strategy of science" which have been developed in the case histories are brought together in outline under the following main heads:

A. New concepts evolve from experiments or observations and are fruitful of new experiments or observations.
B. Significant observations are the result of "controlled experiments" or observations; the difficulties of experimentation must not be overlooked.
C. New techniques arise as a result of experimentation and influence further experimentation.

The case histories are taken from the seventeenth and eighteenth centuries because of the relative simplicity of the factual knowledge involved, but the objective is an understanding of "the way in which science is *now* advancing" (p. 98). In the concluding portion of the course the instructor would therefore "show in a general way how the principles which had been studied in detail from the case histories of long ago are applicable to a few of the advances of the last twenty years" (p. 99).

These case histories and the summary of principles are the solid core of the book. They exhibit expository skill and pedagogic insight of a high order, and they will surely inspire many teachers to develop courses of the kind proposed, or at least to incorporate such material in already existing courses.[2]

[1] For the sake of simplicity, the book does not distinguish principles of tactics from principles of strategy, but it is suggested that in the course "an interesting and perhaps useful distinction could be made between scientists who [like Lavoisier] excelled in strategy and those who [like Priestley] were outstanding as tacticians" (p. 100).

[2] The preface acknowledges the collaboration of Mr. I. B. Cohen in assembling the historical material on which the case histories are based, compiling the bibliographical notes at the end of the volume, and preparing the manuscript for publication.

In striking contrast with this solid core are several confusing references to "the interaction of science and society," including two extended discussions (pp. 60-64, 106-109). In the first three chapters, one gets the impression that this is a subordinate topic under tactics and strategy (see, *e.g.*, p. 31). At the beginning of the fourth chapter, however, it appears that the understanding of science embraces two distinct sets of principles, apparently independent and coördinate: (1) those of the tactics and strategy of science, and (2) those of the interaction of science and society. And on page 106 we are told that "the central topic" of the entire course "might well be 'The Growth of Science as an Organized Social Activity.'" Yet not a single principle of the interaction of science and society is stated as such anywhere in the book. Perhaps a hint of the kind of thing Mr. Conant has in mind may be found on page 60:

> Some ardent advocates of a greater degree of national planning talk as though priceless gems of science were every day being hidden under a mound of unread papers; they imply that discoveries are not being followed up as they should be, that fruitful fields are left unexplored. One of the objects of understanding science should be to correct this almost totally false picture of the current scene.

However that may be, it would seem that the first step toward filling in the second half of Mr. Conant's program should be to extend the notions of tactics and strategy from the level of laboratory experiment, observation, and conceptual schemes to the level of "the interaction of science and society."

The aim of the course, as stated in the first chapter, is an improvement in "the scientific education of the layman."[3] This is desired for three reasons: (1) we have so far failed to assimilate science into our western secular culture, and it is because of this failure that so many feel spiritually lost in the modern world (p. 2); (2) matters of public policy are increasingly affected by highly technical scientific considerations, and it is therefore increasingly important that those in authority and those who shape policy should have some understanding of science (p. 4); (3) until we have a wider and better understanding of the methods of science we cannot answer such questions as the following, which are important to the future of a free people:

> Is there such a thing as a scientific method of wide applicability in the solution of human problems? Is there any significant difference between research in basic science (or pure science) and in applied science? Are the social sciences (psychology, anthropology, sociology, political economy, economics, and history) really sciences? If not, can they become so? (p. 5).

The book is based on the Terry Foundation Lectures at Yale University.

[3] There is no mention of two related programs: (1) the development of the history of science as a humanistic discipline, and (2) the great books program, which includes the major scientific classics. As for (3) courses in the philosophy of science, "I doubt if the philosophical treatments of science and scientific method have been very successful when viewed as an educational enterprise" (p. 13).

The Yale committee originally proposed the subject, "What is Science?" Mr. Conant chose the "less ambitious and more ambiguous" title which his book bears (p. 24), but emerged none the less with an answer to the question posed. He defines science as "that portion of accumulative knowledge in which new concepts are continuously developing from experiment and observation and lead to further experimentation and observation" (p. 98).

> The case histories drawn from the last three hundred years show examples of fruitful and fruitless concepts. The texture of modern science is the result of the interweaving of the fruitful concepts. The test of a new idea is therefore not only its success in correlating the then-known facts but much more its success or failure in stimulating further experimentation or observation which in turn is fruitful. *This dynamic quality of science . . . as development of conceptual schemes . . . can be demonstrated only by the historical approach, or else learned by direct professional experience* (p. 24, italics mine).

More than one passage suggests that the historical approach to the understanding of science is a second best, for laymen only, not for scientists.[4] We are reminded repeatedly that the course is for students of the humanities and social studies. It is not for "future scientists, or doctors, or engineers" (p. 108), but for future "lawyers, writers, teachers, politicians, public servants, and businessmen" (p. 1). That is, for laymen.

It is Mr. Conant's belief that "science can best be understood *by laymen* through close study of a few relatively simple case histories" (p. 1, italics mine). He has been encouraged in this belief by the success that has attended "the teaching of strategy and tactics of war by examples from military history" and the use of "the case method in law schools and a somewhat similar method in the Harvard Business School" (pp. 16-17). It seems not to occur to him that in these instances the case method is used in the education not of laymen but of professionals. Is it not paradoxical to propose that a method of professional education in other fields be adopted for lay education in science *and not for the education of professional scientists?*

When and how does the professional scientist acquire the understanding of science that Mr. Conant wishes laymen to have? Not during his training, for "the story which it seems to me needs telling . . . is not told in courses in physics or chemistry or biology or any other of the natural sciences as far as I am aware" (p. 15). "The principles which I have attempted to illustrate . . . are rarely formulated as such by those who train our future scientific investigators" (p. 99). It is nowhere suggested that laboratory exercises develop this understanding. The answer seems to be that scientists acquire it only "by direct professional experience" (p. 24). But how many of the students who major

[4] It is irrelevantly conceded at one point that "a course . . . on European cultural history as illustrated by episodes in science . . . might be of value in the education of future scientists and engineers" (pp. 62-63), but it is made clear that it is not such a course that is here proposed.

in science in our colleges and universities ever have this professional experience? Indeed, how many lifelong scientific workers ever have professional experience of such a kind as to yield the understanding in question?

Mr. Conant insists that the remedy for the *layman's* lack of this understanding "does not lie in a greater dissemination of scientific information among nonscientists" (p. 12). Is it not possible that an exaggerated importance has been attached to sheer accumulation of factual knowledge by prospective scientists themselves? Does not their training begin to follow the general trend of vocational training? Thus:

(1) Courses and examinations are set up as hurdles to select the fit and eliminate the unfit. (2) It turns out that nothing lends itself so readily to examination and grading as does quantity of factual knowledge, and there is nothing that teachers can do so readily as convey it in lectures and textbooks. (3) As candidates become more numerous, instead of raising qualitative standards, we add more courses and more examinations. For is not the quantity of desirable information also increasing all the while? (4) As courses are piled on courses, the methods of the elementary courses are continued farther up. It is already possible to secure a master's degree by passing courses whose examinations test only the acquisition of information and the ability to follow instructions, and it is only a question of time until this will be true of the doctor's degree also. Can one imagine a more effective way to postpone the understanding of science?

Though Mr. Conant broaches none of these considerations, he must surely have them in mind, and it may fairly be suspected that his book on the tactics and strategy of science is a tactical maneuver in a larger strategy. Our science departments are strongholds of conservatism, and it is in them that we must look for the last stand against educational reform. A radical change in the education of scientists cannot be brought about by frontal attack. But if a new and better kind of scientific education is tried out and makes good in courses for laymen, it may be hoped that it will gradually spread to the professional courses as well and that eventually even scientists may understand science. Meanwhile, to disarm resistance, let us breathe no hint to them of this larger strategy. Let it be assumed that they already have the light, and that we desire only that laymen should share it, as far as laymen may.

University of Illinois MAX H. FISCH

KENNETH UNWIN. *A Century for Freedom. A Survey of the French "Philosophers."* Thinker's Library, No. 109. London, Watts & Co., 1946. 116 pp. 2/6d.

THE "Heavenly City" of the eighteenth-century philosophers never materialized, but their legacy to succeeding generations is still with us in varying forms. It

is not often realized how much of our freedom of thought derives from the scientific and philosophical thinking of the eighteenth century. In the little book under review, Dr. Unwin, who is Senior Lecturer in French at University College, Cardiff, has given us a graphic study of the Encyclopaedists, who made the eighteenth century such a brilliant period in the struggle of science and freedom of thought against the tyranny of tradition. In nine chapters he deals with the rise of rationalism, the struggle against authority, the views of the "philosophers" on morality, religion, deism, materialism, and finally their relation to politics. All in all Dr. Unwin has given us a useful summary of this important period in the history of human thought.

There is a key to the books quoted in the text; and a series of biographical notes on the important philosophers of the Enlightenment adds to the utility of this study.

GEORGE ROSEN

EDWARD PODOLSKY. *Doctors, Drugs and Steel.* New York, The Beechhurst Press, Bernard Ackerman, Inc., 1946. 384 pp., illustrated. $3.75.

WRITTEN in a breezy, journalistic style this book is an attempt at an interpretation of some recent advances in medicine and surgery for the layman.

The book is divided into eleven main parts and forty-six chapters. Among the topics are heart surgery, brain surgery, skin and bone grafting, advances in the treatment of tuberculosis, leprosy, syphilis, and cancer. Succeeding chapters take up the the story of childbirth, miracles with blood, penicillin and the antibiotics, and, finally, an inevitable concluding chapter on atomic power and medicine. In his discussion of the various subjects of which he treats the author has included many references to the work of Soviet medical men and scientists whose contributions deserve to be better known over here.

No one will deny that the author has covered a tremendous field in his book and indeed he deserves much credit for pointing out the extent of the advances in medicine and surgery in recent years, especially under the stimulus of the war. But at the same time one cannot help wishing that Dr. Podolsky had been a little less ambitious and had narrowed his field a bit in order to give his subject more thorough treatment. Because he has spread himself thin, as it were, some of his statements are not as accurate as they should be.

A few examples of inaccuracies will suffice to make the point. On pages 187-188 the author tells the story of the discovery of radium by Pierre and Marie Curie. On page 188 of this account Dr. Podolsky manages to convey the impression that Pierre Curie died prior to the actual discovery of radium and that Marie Curie made the discovery independently. The facts are that Pierre and Marie Curie published the account of their discovery in 1898 and they both

named the element radium which they knew as its chloride. The identity of radium was thus established by both Curies prior to the death of Pierre in 1906. Incidentally, the standard biographies of the Curies agree that Pierre was killed by a horse-drawn dray and not by a streetcar as stated by Dr. Podolsky on page 188.

Dr. Podolsky's account of the discovery of penicillin is so brief that it might better have been omitted. He states that since 1929 it has proved to be one of the most effective germ-killers known to man. Nevertheless there is no mention of the fact that the first clinical tests on man were not made until 1940 and the names of Drs. Florey, Chain, and their associates, who established the therapeutic value of the drug, are conspicuously absent.

In chapter 45 the author discusses the so-called "radio waves of the human body." Now it happens that this is a romanticized description of one of the most difficult and controversial subjects in biological and medical research. Yet Dr. Podolsky glibly writes on this subject for the layman as if there were a well-established body of fact upon which physicians may establish reliable diagnostic procedures. He discusses, for example, the mitogenetic radiations which were described by the Russian scientist, Dr. Gurwitsch. Dr. Gurwitsch claimed that the various tissues of the body give off characteristic radiations, that these radiations are specific for various tissues and can even be used diagnostically. Dr. Podolsky seems to accept this matter as well-established fact, and he writes as if the majority of medical and scientific men felt likewise. It seems worthwhile therefore to quote from a work by Dr. Otto Glasser, biophysicist of the Cleveland Clinic Foundation, who has studied the subjects of the mitogenetic radiations at some length. In his book *Medical Physics* (1944) p. 762, Dr. Glasser writes: "From a survey of representative experiments on mitogenetic radiations reported from 1923 to the present, it seems clear that manifold contradictions make it difficult to accept the theory of mitogenetic radiation."

Finally, the author in current fashion attempts to prognosticate upon the future of atomic energy in medicine. Here again he takes the uninitiated into a field where the fog of speculation and fantasy make the few available facts difficult to find. On page 369 Dr. Podolsky discusses the rôle of potassium in the regulation of the heartbeat. He quotes from certain investigations which purport to show that this effect is related to the radioactivity of potassium and that furthermore this activity must be ascribed not to potassium as a whole but to one of its isotopes K41. It happens that the isotope K40 and not K41 is responsible for the entire known radioactivity of potassium. Authority for this statement will be found on page 178 of the *Physical Review* of February 1, 1937.

The above criticisms of what could have been an excellent book are offered in the hope that the author and other writers who assume the responsibility of

interpreting for the layman that most difficult of all subjects, medicine, will realize that a facile pen and a brilliant style are not adequate substitutes for rigorous research and accurate statement of fact.

Washington, D. C. MORRIS C. LEIKIND

JOSEPH I. MEIER. *Origin and Development of Group Psychotherapy. A historical survey—1930-1945.* Psychodrama Monographs No. 17. New York, Beacon House, Inc., 1946. 44 pp. $1.75.

PSYCHODRAMA was utilized as a form of psychotherapy in several religious organizations, but it was really scientifically studied from 1909 on, when J. L. Moreno started his practice of letting children and juveniles play spontaneously on the famous Vienna Meadow Garden. In 1927 Moreno came to the United States.

Joseph Meier's survey is good in so far as it concerns Moreno's form of group psychotherapy. Unfortunately, Mr. Meier entirely ignores Moreno's precursors. One of the most interesting attempts of psychodrama-therapy was undertaken in 1804 by M. de Coulmier, Director of Charenton Asylum, who allowed the famous Marquis de Sade, one of his patients, to organize with his fellows a theatre with the idea of curing the insane. This same experiment was successfully introduced by Dr. Loudet at the Bicêtre in 1839 and in many other places since that time. (See Jean Desbordes, *Le vrai visage du Marquis de Sade,* p. 304, and A. Adam, *Über Geisteskrankheiten in alter und neuer Zeit,* Regensburg, 1928, p. 149.)

In the beginning of the nineteenth century, the German psychiatrists used military drill as a form of group psychotherapy. Esquirol insisted on the value of group occupational therapy (*Des maladies mentales,* 1838, II, p. 742); and Mesmer started another form of group psychotherapy which became very active when exercised as collective suggestions by Bernheim or Coué.

From the Greeks down to the present, music played by or to the insane and neurotics has been applied as a curative measure. Many more examples could be found to challenge this sentence in Dr. Meier's booklet: "After approximately 50 years of the existence of the various psychotherapeutic methods (mainly in France and Switzerland) and after the rise of the psychoanalytic methods, all of these centered upon the individual alone—it was inevitable that someone had to feel that the advantages of individual psychotherapy should be extended to the greatest possible number of sufferers."

All of this, however, does not question Moreno's merit. Moreno founded a new and interesting form of group psychotherapy.

New York City RAYMOND DE SAUSSURE

W. E. TATE. *The Parish Chest. A Study of the Records of Parochial Administration in England*. Cambridge, At the University Press, 1946. x + 346 pp. 16 illus. 21/-.

WHOEVER takes the trouble to study the origins of the public health movement in England will find himself inevitably led to study the problem of the Poor Law and parochial administration. To this subject of parochial administration, Mr. Tate's book furnishes a handy introduction. After a brief description of the social structure and the functions of the English parish, he discusses the parish chest in which the records were kept. The rest of the book is divided into two parts, the first dealing with "Records Mainly Ecclesiastical," the second with "Records Mainly Civil."

Among the records discussed there are a number that deal with subjects of interest to students of medical history. The early history of birth and death registration is discussed (pp. 44-51). A sidelight is thrown on obstetrical practice by an entry (p. 59) to the effect that: "Robert, daughter of William Thompson, bap. 15 Feb. 1730, the midwife mistaking the sex,—she was crazed with liquor (*ebrietas dementat*)." The picturesque custom of touching for the King's Evil has left many traces in the parish records, since a proclamation of 1626 required each patient to bring a certificate from the minister and church-wardens of his parish that he had not already been touched (pp. 156-160).

Various references to medical treatment are extant and are of considerable interest. A typical example of a contract for medical attention to the poor in 1777, reads as follows (p. 166): "It is agreed that Mr. Edw. Jackson of Bedford, surgeon, bonesetter and apothecary & man-midwife (if a woman can't do) do attend the poor in illness (the small pox excepted) for the sum of £10.10s. to Easter 1778, the overseer sending an order." Quaint old medical recipes often appear in registers or are preserved in the parish chest.

From these selected samples the reader will see that *The Parish Chest* contains a wide variety of interesting information, and should be consulted by anyone who wants to know something about parochial administration in relation to medicine.

GEORGE ROSEN

C. E. KENNETH MEES, with the co-operation of JOHN R. BAKER. *The Path of Science*. New York, John Wiley & Sons, Inc., 1946. xii + 250 pp. $3.00.

ALTHOUGH scientific research and technological development are vital features of contemporary civilization, appreciation of the scientific approach is far from adequate. This is true not only for the "man in the street"—the college graduate is exposed to an impressive number of scientific facts but he rarely acquires

an understanding of the scientific method as "the" way of arriving at dependable, articulated knowledge. The professional scientist is apt to be so overwhelmed by the wealth of details and the intricacies of the specific methods of observation in his tiny corner of the scientific universe that he often fails to comprehend the status and significance of science, considered from the epistemological and sociological point of view. To provide information on these aspects of science was the aim of Mees' book.

Though largely historical in its approach, it is far from being a typical text on the history of science, except for the three chapters illustrating the growth of science by following the development of physical, chemical, and biological ideas. Dr. Mees is not a professional historian of science but the director of industrial scientific research for Eastman Kodak Company. Dr. Baker, who wrote the chapter on the history of biology, is a zoologist at Oxford University. They felt that an understanding of present-day science as well as the prediction of its future course cannot be attempted with any hope of success without the knowledge of its past.

The first two chapters are designed to provide a frame of reference against which the history of science could be projected. The author is unduly impressed with Petrie's version of the cyclic nature of history; over twenty pages devoted to it are of little relevance, particularly as the concept is not tied intimately enough with the central topic of the book, the characterization of the scientific method and its historical development.

The author points out that science began as a description and classification of facts. For a long time the objects of scientific observation were primarily the naturally occurring phenomena. It is only since the systematic application of the experimental method in the seventeenth century that *new* facts have been produced in a context designated by the scientist who wished to study the interrelationships between experimentally separated variables. The operations involved in the creation of scientific knowledge are summarized as follows: "The scientist assembles his facts (sense data based ideally on determinations of coincidence of pointers with marks on the scales of the measuring instruments), he translates his data into constructs that he invents for the purpose according to certain rules that experience has shown to be useful. He then assembles these constructs, frequently using the language and methods of mathematics, into a theory and, finally, he verifies the theory by deriving from it new conclusions that can be determined by observation." This statement defines well the modern concept of science.

Historically, the first prerequisite of scientific progress was the overthrow of the authority of the ancient writers. Vesalius' work in anatomy and Copernicus' astronomy were outstanding in this respect. Galileo, in addition to his astronomical observations, contributed significantly to the advancement of the

science of mechanics and exemplified in his studies the technique of validating hypotheses by direct experimentation. Francis Bacon, although not a scientist himself, was influential because of his emphasis on observation and experiment against the acceptance of tradition and his faith in the possibilities of practical application of scientific knowledge. Descartes' demand for clarity and distinctness in thinking, stress on the coherence of ideas, and faith in deductive reasoning represent the mathematico-logical component in the development of modern science.

The growth of knowledge was significantly furthered by the scientific societies, such as the Royal Society (1662) and the American Philosophical Society (1743). The function of the Royal Society was to "socialize" the scientific endeavor of isolated individuals experimenting in the field of "natural philosophy." It provided a rallying point, a method of exchanging views, and a method of publication (the *Transactions*). In the later part of the eighteenth and through the nineteenth century the systematic advancement of science became a function of the universities.

The development of industry depended to a large degree on individual inventive genius with little dependence on scientific research. Only after the amount of technical information increased beyond the mastery of any one individual and after it became evident that scientific research was indispensable for the development of certain new materials and manufacturing processes, do we see the rise of industrial research laboratories. The research departments in industry are concerned, in decreasing order of importance, with production control (testing of materials, processes, and products), development (improving the quality, reducing the production cost, introducing new products), and "pure" research on the related fundamental problems. An important type of industrial research organization is represented by the technological research institutes, such as the Mellon Institute of Pittsburgh. They carry on work of direct interest to the particular industrial firms and train men for intra-mural industrial research.

In the field of "pure" science the increase in the specialization of scientific personnel, the need for continuity in research resulting in part from the increased complexity and cost of the apparatus, and the sheer magnitude of the research tasks led also to cooperative efforts expressed in the creation of research institutes. These may specialize in a relatively small sector of *one scientific discipline* (T. H. Morgan's work at the California Institute of Technology on the genetics of the Drosophila fly) or concentrate on *one subject* studied by a team of scientists who are trained in different disciplines (Geophysical Laboratory of the Carnegie Institution where the structure and formation of rocks is investigated by geologists, physicists, crystallographers, mineralogists, and chemists). In contrast to the specialized work of the research institutes,

engaged either in theoretical or applied investigations, the universities retain the responsibilities for training men in the fundamental sciences and the basic techniques and philosophy of scientific research. The author is strongly in favor of retaining the freedom of an academic investigator to choose research topics of his own, as a balance to the trend of the time placing emphasis on coordinated and planned research.

Although criticisms could be raised against a number of points of content and style, especially the organization of the material, the book is a welcome contribution to the "science of science." The picture of the scientific growth is inevitably one-sided and the book is particularly weak as far as the sciences of man are concerned. Also, inadequate attention was given to the organization, coordination, support, stimulation, and utilization of scientific research during the Second World War (*e.g.* work of the Office of Scientific Research and Development and its committees, such as the Committee on Medical Research). In spite of these limitations the book may be utilized advantageously as a basic text for a new type of course on history of science, in which the emphasis would be put on the development of the scientific method as a tool of knowledge and on the interaction between science and society.

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S. Z. ORGEL. *Psychiatry Today and Tomorrow*. New York, International Universities Press, 1946. 514 pp. $7.50.

DR. SAMUEL ZACHARY ORGEL practised pediatrics before he became interested in psychiatry. The emotional disturbances of the child struck him as an especially important field and led him to go to Vienna and to study psychoanalysis under Professor Freud. He enlarged his field and soon began practising as a psychiatrist. For the past twenty-five years Dr. Orgel has taught psychiatry in the Mount Sinai Hospital School for Nurses. His book is a complete survey of mental diseases from a modern psycho-dynamic approach.

The chapter on the History of Psychiatry is, unfortunately, not the best one. The French names on page 24 are distorted: you should read Trelat for Trelate, Baillarger for Maillarger, Lasègue for Leseque, and so on.

In his chapter on Occupational Therapy the author writes that this form of treatment has been used empirically for the insane for over a century: "extant knowledge, however, of this form of therapy for special conditions dates back to 1910." This contention is not entirely right. Esquirol in 1838 studied very carefully the action of occupational therapy on the health of the insane.

Despite these small errors, Orgel's work constitutes a vast survey of mental illness, an inquiry which describes many clinical and therapeutic aspects of psychiatry and a book which is worthwhile reading.

New York City RAYMOND DE SAUSSURE

BERNARD ASCHNER. *Treatment of Arthritis and Rheumatism in General Practice, Particularly in Women*. New York, Froben Press, 1946. 340 pp. $5.00.

THE monograph under review differs in one outstanding respect from the usual volume on arthritis and allied conditions. Medicine as we know it at present has almost entirely discarded the therapeutic practices employed prior to the nineteenth century. Dr. Aschner feels that in so doing the baby has been thrown out with the bathwater, and claims that better results in the treatment of arthritis and allied conditions could be obtained by means of a synthesis of the traditional historical methods with modern standards. To document his point, the author devotes the first chapter of his book to an historical review of the treatment of arthritis. It is this section which will undoubtedly be of greatest interest to readers of the *Journal*; while the remainder of Dr. Aschner's book is not of immediate concern as history, it is of considerable interest and should be subjected to verification. There is no doubt that from our objective, scientific point of view, we tend to overlook or to exclude alleged facts which cannot be integrated easily into our accepted theories. A monograph such as Aschner's must be approached with an open mind; by so doing we may be rewarded with a new understanding of an old truth.

GEORGE ROSEN

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